







OFFICIAL YEAR BOOK  
OF THE COMMONWEALTH OF AUSTRALIA

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OFFICIAL  
YEAR BOOK  
OF THE  
COMMONWEALTH  
OF AUSTRALIA

No. 58, 1972

*Prepared under instructions from the Right Honourable the Treasurer by*

J. P. O'NEILL

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COMMONWEALTH BUREAU OF CENSUS AND STATISTICS

CANBERRA, AUSTRALIA

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OF THE  
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## PREFACE

By the Constitution of the Commonwealth of Australia, the Parliament of the Commonwealth is empowered, subject to the Constitution, 'to make laws for the peace, order, and good government of the Commonwealth, with respect to . . . Census and statistics.' In the exercise of the power so conferred, a Census and Statistics Act was passed in 1905, and in the year following the Commonwealth Bureau of Census and Statistics was created. The first Official Year Book was published early in 1908. The publication here presented is the fifty-eighth Official Year Book issued under the authority of the Commonwealth Government.

In the various chapters of the Year Book, and in the special index which precedes the general index, there are references to special articles, background material and items of historic interest which have appeared in previous issues.

Among new or revised material included in this issue, the following items may be especially mentioned.

Chapter 6. International Relations. A note on Australia's membership of OECD, page 118.

Chapter 7. Population. Preliminary results from the 1971 Census of Population and Housing, including selected characteristics, *see* Appendix. Population projections to the year 2000, page 142.

Chapter 9. Housing and Building. Preliminary statistics from the 1971 Census of Population and Housing are included in the Appendix.

Chapter 10. Labour, Wages and Prices. Results of the May 1971 survey of weekly earnings, showing a classification of adult male employees into earnings groups, page 252. A dissection between overtime and ordinary time earnings, and classifications according to industry, State and employment category are shown.

Chapter 11. Overseas Transactions. Summary statistics from a new series of surveys of overseas borrowing are included in the Appendix.

Chapter 12. Transport, Communication and Travel. A note on the activities of the Australian Transport Advisory Council, page 331.

Chapter 13. Welfare Services. Results of surveys of age, invalid and widow pensioners conducted in 1970 and 1971 by the Department of Social Services in New South Wales and Victoria, page 411. A short note on the role of voluntary agencies in Australian social welfare, page 417.

Chapter 18. Public Finance. The Public Finance and Local Government chapters have been combined and reorganised to give a better account of the financial roles of the three levels of government: Commonwealth, State and local. The statistics are on a basis consistent with the Australian national accounts. There is a section dealing with public borrowing at all levels. For the time being the chapter includes some information previously given in the Local Government chapter relating to services provided by specific State authorities, such as roads and bridges, water and sewerage, and harbour boards; some of this material may be relocated in future issues.

Chapter 19. Education, Cultural Activities, and Research. The section dealing with expenditure on education has been expanded a little. A summary table on page 670 shows expenditure by the public and private sectors.

Chapter 20. Employment and Unemployment. Results of a survey of multiple jobholding conducted in May 1971, page 707.

Chapter 28. The Territories of Australia. A summary of Government policy in relation to the advancement of Aborigines in the Northern Territory, page 957.

Chapter 29. Miscellaneous. An article on metric conversion in Australia.

The usual series of graphs has been updated.

The material in the Year Book has been carefully checked throughout, but I shall be grateful to those who will be kind enough to point out defects or make suggestions.

Most of the statistics contained in this volume relate to the years ended June or December 1971. More detailed statistics on subjects dealt with in the Year Book are available in the various annual reports published by this Bureau, and more recent statistics are contained in the *Digest of Current Economic Statistics* (monthly), the *Monthly Review of Business Statistics*, the *Quarterly Summary of Australian Statistics*, and in other publications issued monthly, quarterly, half-yearly, or yearly. The last pages of this volume contain a list of current and recent printed publications available for purchase, showing issue numbers, dates, and prices.

J. P. O'NEILL

Commonwealth Statistician

Commonwealth Bureau of Census and Statistics,  
Canberra, A.C.T. 2600. December 1972



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## SYMBOLS AND OTHER FORMS OF USAGE IN THIS YEAR BOOK

The following *symbols*, where shown in tables, mean:

n.a. —not available

. . —nil or less than half the final digit shown, or not applicable

p —preliminary—figure or series subject to revision

r —figure or series revised since previous issue

n.e.i.—not elsewhere included

n.e.c.—not elsewhere classified

n.s. —not stated

m.—males; f.—females; p.—persons

— Break in continuity of series (where drawn across a column between two consecutive figures).

A blank space in a column of figures means that the figure concerned is not yet available.

The following *abbreviations* are used for the titles of the Australian States and Territories and the Commonwealth of Australia: N.S.W. (New South Wales), Vic. (Victoria), Qld (Queensland), S.A. (South Australia), W.A. (Western Australia), Tas. (Tasmania), N.T. (Northern Territory), A.C.T. (Australian Capital Territory), Aust. (Australia), Cwlth (Commonwealth).

In general, the *statistics in this volume relate to the States and Territories of the Commonwealth of Australia*, i.e. they exclude particulars of the External Territories of Australia, which, however, are specifically dealt with in Chapter 28, The Territories of Australia. A few series elsewhere include particulars of Papua New Guinea because of the nature of the subject-matter—these series are indicated.

*Yearly periods* shown as e.g. 1971 refer to the year ended 31 December 1971; those shown as e.g. 1970–71 refer to the year ended 30 June 1971. Other yearly periods are specifically indicated. The range of years shown in table headings, e.g. 1901 to 1970–71, indicates the period covered, but does not necessarily imply that each intervening year is included.

*Values* are shown in Australian dollars (\$) or \$A) or cents (c) unless another currency is specified.

*Reference numbers.* In the introductory paragraphs to most chapters a list of relevant publications is shown. In each case the reference number is shown in brackets and this should be quoted when ordering Bureau publications.

*Any discrepancies between totals and sums of components* in tables are due to rounding.

Unless otherwise indicated, the *British system of weights and measures* is used. The weights and measures used in recording production, etc. of different commodities are as follows:

Bushel (bus)	.	.	=	approximately 2,218 cubic inches
Gallon (gal)	.	.	=	Imperial gallon of approximately 277 cubic inches
Pound (lb)	.	.	=	pound avoirdupois
Cental	.	.	=	100 pounds
Hundredweight (cwt)	.	.	=	112 pounds
Ton	.	.	=	Long ton of 2,240 pounds
Short ton	.	.	=	2,000 pounds
Bale (of wool)	.	.	=	approximately 300 pounds
Barrel (crude oil)	.	.	=	approximately 35 imperial gallons

Cereals, fruit and certain other products are generally recorded in bushels. While the weight of a bushel varies according to the nature of the product, it is also subject to considerable variation for individual products on account of such things as variety and method of packing. However, average bushel equivalent weights, as set out below, may be used for the conversion of each of these products to pounds weight avoirdupois.

**BUSHEL WEIGHTS**  
(lb per bushel)

<i>Product</i>	<i>lb per bushel</i>	<i>Product</i>	<i>lb per bushel</i>	<i>Product</i>	<i>lb per bushel</i>
Apples . . . . .	42	Maize . . . . .	56	Pineapples . . . . .	42
Apricots . . . . .	48	Mandarins . . . . .	48	Plums and prunes . . . . .	58
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Clover seed . . . . .	60	Oranges . . . . .	48	Safflower . . . . .	40
Custard apples . . . . .	35	Panicum . . . . .	60	Setaria . . . . .	60
Figs . . . . .	44	Papaws . . . . .	24	Sorghum . . . . .	60
Flax seed (pure seed) . . . . .	56	Passion fruit . . . . .	34	Soya beans . . . . .	60
Flour . . . . .	56	Peaches . . . . .	45	Strawberries . . . . .	30
Grapefruit . . . . .	42	Peanuts . . . . .	22	Sunflower seed . . . . .	33
Grass seed (most varieties) . . . . .	20	Pears . . . . .	45	Tares . . . . .	60
Lemons . . . . .	48	Peas, field (dry) . . . . .	60	Tomatoes . . . . .	48
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# CHAPTER 1

## DISCOVERY, COLONISATION, AND FEDERATION OF AUSTRALIA

### Early knowledge and discovery of Australia

The following paragraphs contain only a bare outline of the more important facts relating to the early history of Australian discovery. A more detailed summary of these facts may be found in Year Book No. 39 (*see* page 1) and earlier issues.

#### Terra Australis

Although references to an Austral land are found in the works of writers in the early centuries after Christ, and evidence appeared in maps, globes, and manuscripts from the Middle Ages onward, there is no definite evidence connecting this so-called *Terra Australis* with Australia. Cornelius Wytfliet's map of 1597, however, indicates roughly the eastern and western coasts of Australia, as well as the gulf of Carpentaria.

#### Early discoveries of Australia

The Portuguese may have discovered part of the Australian coast before 1542, and it has been suggested that the Arabs may have come to Australia even earlier, though there is no evidence to support this theory. For all practical purposes, however, the coastal exploration of Australia may be taken as having begun with the Spaniards and the Dutch.

In 1606 the Spaniard Quiros, on reaching the island that has retained the name of Espiritu Santo (the largest island of the New Hebrides group), thought he had discovered the great land of the south, and therefore named the group *La Australia del Spiritu Santo*. After leaving the New Hebrides Quiros sailed eastward, but Torres, his second-in-command, took a westerly course and passed through the strait that now bears his name. In all probability he sighted the Australian continent but no mention of it is made in his records. This voyage marks the close of Spanish activity in the work of discovery in the South Seas.

The Dutch discovered Australia when the Dutch East India Company sent the *Duyfken* from Bantam, Java, to explore the island of New Guinea. During March 1606 the *Duyfken* coasted along the southern shores of New Guinea and followed the west coast of Cape York peninsula as far as Cape Keer-Weer (Turn Again).

During the following thirty years there were nine visits by Dutch navigators to Australian waters; by 1636, through their efforts, the coast of Australia from Cape York westward around to the Great Australian Bight had been discovered.

In 1642 Abel Janszoon Tasman set out from Batavia to ascertain the extent of the great southern continent. He named Van Diemen's Land, imagining it to be part of Australia proper, and sailing north-easterly discovered New Zealand and returned to Batavia. In his second voyage in 1644 Tasman visited the northern coast of Australia, sailing round the Gulf of Carpentaria and along the north-west coast as far south as the tropic of Capricorn. This voyage of Tasman's may be said to have ended the period of Dutch discoveries, although there were subsequent visits by the Dutch to Australia (de Vlamingh in 1696 and Van Delft in 1705).

#### Discoveries by the English

In the meantime the English had made their first appearance on the Australian coast in 1688, when the north-westerly shores were visited by William Dampier, as supercargo of the *Cygnets*, a trading vessel whose crew had turned buccaneers. In 1699 he again visited Australia, in command of H.M.S. *Roebeck*, and on his return to England published an account in which a description is given of trees, flowers, birds, and reptiles observed, and of encounters with natives.

At the end of the seventeenth century it was uncertain whether Tasmania and New Zealand were parts of Australia or whether they were separated from it but themselves formed part of a great Antarctic Continent. Lieutenant (later Captain) James Cook's first voyage, though undertaken primarily for the purpose of observing the transit of Venus from Tahiti, had also the objective of ascertaining whether the unexplored part of the southern hemisphere was only an immense mass of

water or contained another continent. In command of H.M.S. *Endeavour*, and accompanied by Sir Joseph Banks the botanist, Dr Solander the naturalist, Green the astronomer, draughtsmen, and servants, Cook, after observing the transit of Venus at Tahiti, turned towards New Zealand, sighting that land on 7 October 1769 in the neighbourhood of Poverty Bay. Circumnavigating the North and South Islands, he proved that New Zealand was connected neither with the supposed Antarctic Continent nor with Australia, and took formal possession thereof in the name of the British Crown.

### Discovery of Australia by Captain Cook

On 20 April 1770\* Cook sighted the Australian mainland at a place he called Point Hicks, naming it after his first-lieutenant, who first saw it. Coasting northwards, on 29 April 1770\* he discovered Botany Bay, where he landed. Cook sailed along the coast in a northerly direction for nearly 1,300 miles until 11 June 1770, when the *Endeavour* was seriously damaged by striking a coral reef in the vicinity of Trinity Bay. Repairs occupied nearly two months, and the *Endeavour* then again set her course to the north sailing through Torres Strait and eventually anchoring in the Downs on 13 July 1771. In 1772 Cook was put in command of the ships *Resolution* and *Adventure* with a view to ascertaining whether a great southern continent existed. Having satisfied himself that, even if it did, it lay so far to the south as to be useless for trade and settlement, he returned to England in 1774. Cook's last voyage was undertaken in 1776, and he met his death on 14 February 1779, by which date practically the whole coast of Australia had been explored. The only remaining discovery of importance, the existence of a channel between Tasmania and Australia, was made by Bass and Flinders in 1798.

## The annexation of Australia

### Possession taken of eastern coast of Australia by Captain Cook

Although representatives of the nations mentioned in the previous section landed or claimed to have landed on the shores of Australia on various occasions during the sixteenth and seventeenth centuries, it was not until 22 August 1770† that the history of Australia was brought into definite political connection with western civilisation. It was on that date that Captain Cook took possession 'of the whole eastern coast, from latitude 38° S. to this place, latitude 10½° S. in right of His Majesty King George the Third', i.e. over only what are now the eastern parts of New South Wales, Victoria and Queensland.

### Annexation of eastern part of Australian continent and Tasmania

Formal possession, on behalf of the British Crown, of the whole of the eastern part of the Australian continent and Tasmania was not taken until 26 January 1788, when Captain Phillip's Commission, first issued to him on 12 October 1786 and amplified on 2 April 1787, was read to the people whom he had brought with him in the 'First Fleet'. The commission appointed Phillip 'Captain-General and Governor-in-Chief in and over our territory called New South Wales, extending from the Northern Cape or extremity of the coast called Cape York, in the latitude of ten degrees thirty-seven minutes south, to the southern extremity of the said territory of New South Wales or South Cape, in the latitude of forty-three degrees thirty-nine minutes south and of all the country inland westward as far as the one hundred and thirty-fifth degree of east longitude reckoning from the meridian of Greenwich, including all the islands adjacent in the Pacific Ocean within the latitudes aforesaid of ten degrees thirty-seven minutes south and forty-three degrees thirty-nine minutes south'.

### Extension of New South Wales westward

On 17 February 1824 Earl Bathurst notified Sir Thomas Brisbane that he had recommended to His Majesty the dispatch of a ship of war to the north-west coast of New Holland for the purpose of taking possession of the coast between the western coast of Bathurst Island and the eastern side of Coburg Peninsula. Captain James J. Gordon Bremer of H.M.S. *Tamar*, who was selected for the purpose, took possession on 20 September 1824 of the coast from the 135th to the 129th degree of east longitude. On 16 July 1825 the whole territory between those boundaries was described in Darling's commission as being within the boundaries of New South Wales.

\* Year Book No. 1 shows the dates of these events as '19th April' and '28th April' respectively. In Year Book No. 2 they have been changed to '20th of April' and '29th April', and the following footnote inserted:

1. *Correct dates of Captain Cook's Log.* After the 180° meridian of longitude had been passed, and owing to no allowance having been made for westing, the various log-books of this voyage are in error one day as to dates. Thus those in Captain Cook's private log in his official log, in Gunner Forwood's, Pickergill's, Clerke's, Wilkinson's, and Bootie's Journals, in the Pallister copy of Cook's log, and in Wharton's publication, all need correction by adding one day to the date given: that is, the 19th should read the 20th, etc. The anonymous log, doubtless Green's, is erroneously supposed by the author of the "Historical Records of New South Wales," to have been corrected for westing, see the footnote on page 269 therein. The facts are as follows:—What was known as "ship time" began a day earlier than under the present system of astronomical reckoning, that is to say, Jan. 1 began at noon Dec. 31. The "Astronomical day," however, was a whole day later than the ship's day: thus what would be assigned to the 24th in Cook's Journal would appear in Green's Journal as the 23rd. (See "Captain Cook's Journal," 1768–71, by Captain W. J. L. Wharton, R.N., F.R.S., London, 1893, preface pp. xii., xiii.) There can be no doubt as to the need of the correction in the dates, since on reaching Batavia the log reads:—"Wednesday 10th, according to our reckoning, but by the people here Thursday 11th." (Op. Cit., pp. 352–3.) Attention was drawn to this matter by Mr. P. de Jersey Grut in the "Argus," Melbourne, May 15, 18 and 22, 1907.

† In all issues up to Year Book No. 56 this date was incorrectly shown as 23 August 1770.



### Annexation of Western Australia

An expedition under Major Lockyer, sent by Lieutenant-General Sir Ralph Darling, then Governor of New South Wales, to found a settlement at King George Sound, sailed from Sydney on 9 November 1826, landed at the Sound on 26 December following, and on 21 January 1827 hoisted the British flag. Captain Stirling, in command of H.M.S. *Success*, arrived at Sydney a few weeks after the departure of the expedition to King George Sound. He obtained the Governor's permission to visit Swan River with a view to seizing a position on the western coast and reporting upon its suitability as a place of settlement. Captain Stirling left Sydney on 17 January 1827, and on his return in the following April submitted a glowing report on what he described as a 'rich and romantic country', urging its occupation for the purpose of settlement. He left for England in July 1827, continuing his advocacy, notwithstanding much discouragement, with unabated enthusiasm. He was at last successful, the result being due mainly to the formation of an association of prospective settlers having capital at their disposal. He was appointed Lieutenant-Governor and with a party of settlers arrived at Garden Island, near the Swan River, in the ship *Parmelia* in June 1829. On the second of the preceding month Captain Fremantle, in command of H.M.S. *Challenge*, arrived and hoisted the British flag on the south head of Swan River, again asserting possession of 'all that part of New Holland which is not included within the Territory of New South Wales'. Thus before the middle of 1829 the whole territory now known as the Commonwealth of Australia had been constituted a dependency of the United Kingdom.

## The creation of the several Colonies

### New South Wales

In Governor Phillip's commission of 1786 the mainland of Australia was divided by the 135th meridian of east longitude into two parts. The earliest colonists believed that the present State of Tasmania was actually joined to the mainland, and it was not until 1798 that the contrary was known. In that year Bass and Flinders proved that it was an island by sailing through Bass Strait. The territory of New South Wales, as originally constituted (1,480,527 square miles, including Van Diemen's Land 26,215 square miles), and of New Zealand (103,862 square miles), which may be included although Cook's annexation was not properly given effect to until 1840, consisted of 1,584,389 square miles. A further area of 518,134 square miles was added in 1825 when the western boundary was extended to 129th east meridian. The territory was subsequently reduced by the separation of various areas to form the other colonies, and at the time of the establishment of the Commonwealth the area of New South Wales was 310,372 square miles. Following the transfer of the Australian Capital Territory and an area at Jervis Bay to the Commonwealth in 1911 and 1915 respectively the area was further reduced to 309,433 square miles.

Lord Howe Island, which is a dependency of New South Wales, and for political purposes is included in one of the electorates of Sydney, is situated in latitude 31° 30' south, longitude 159° 5' east, about 487 miles east-north-east of Sydney, and has an area of 3,220 acres.

### Tasmania

Van Diemen's Land, first settled in 1803, was politically separated from New South Wales in 1825, being constituted a separate colony on 14 June. The area of the colony was 26,215 square miles. The name of the colony was officially changed to Tasmania in 1856 when responsible government was established. Following a resurvey of local government areas, the area of Tasmania was determined at 26,383 square miles at the end of 1964.

Macquarie Island, about 1,000 miles south-east of Hobart, together with a few rocky islets nearby, has been a dependency of Tasmania since the nineteenth century. In December 1911 five members of the Australasian Antarctic Expedition landed on the island and remained there until 1915. On 3 March 1948 another party was landed to man a new station which has been since maintained as a scientific base. The island is about twenty-one miles long and two miles wide.

### Western Australia

The territory westward of the 129th meridian, comprising 975,920 square miles, was constituted a colony under the name of Western Australia in June 1829. It was always distinct and independent of New South Wales, except for the settlement on King George Sound (*see above*), which remained under the jurisdiction of New South Wales until 1831.

### South Australia

On 15 August 1834 the Act 4 and 5 William IV., cap. 95, was passed, creating South Australia a 'province', and settlement took place towards the end of the year 1836. The first Governor, Captain Hindmarsh, R.N., arrived at Holdfast Bay on 28 December 1836, and on the same day the new colony was officially proclaimed. The new colony embraced 309,850 square miles of territory, lying south of the 26th parallel of south latitude and between the 141st\* and 132nd

\* The actual surveyed boundary between South Australia and Victoria is at 140° 58' east longitude.

meridians of east longitude. On 10 December 1861, by authority of the Imperial Act 24 and 25 Vict., cap. 44, the western boundary of South Australia was extended to coincide with the eastern boundary of Western Australia, namely, the 129th east meridian. The area of the extension was approximately 70,220 square miles. Nearly two years later on 6 July 1863, the Northern Territory, comprising 523,620 square miles, was brought under the jurisdiction of South Australia, which thereupon controlled an area of 903,690 square miles. The Territory was transferred to the Commonwealth on 1 January 1911 (*see* page 5). Following a resurvey of Northern Territory notified in 1964 the area was reduced by 3,340 square miles.

#### **New Zealand**

Although Captain Cook had taken possession of the North Island of New Zealand in November 1769, and of the South Island in January 1770, it is doubtful whether at the time when Captain Phillip's commission was drawn up New Zealand was considered as one of the 'islands adjacent in the Pacific Ocean' (*see* page 2). The fact that under the Supreme Court Act (Imperial) of 1823 British residents in New Zealand were brought under the jurisdiction of the Court at Sydney, and that in 1839 there was a proposal on the part of the British Government to appoint a consul in New Zealand, leaves this an open question, as nothing more than extra-territorial jurisdiction may have been intended. New Zealand does not appear to have become British territory unequivocally until 1840, when Captain Hobson arrived at the Bay of Islands, and on 30 January read his commissions, which extended the boundaries of the Colony of New South Wales so as to embrace and comprehend the islands of New Zealand. In February 1840 the Treaty of Waitangi, made with the native chiefs, was signed. Finally, on 21 May 1840 British sovereignty over the islands of New Zealand was explicitly proclaimed. New Zealand remained a dependency of New South Wales until, by letters patent of 16 November 1840, it was constituted a separate colony under the powers of the Act 3 and 4 Vict., cap. 62, of 7 August 1840. Proclamation of the separation was made on 3 May 1841. The area of the colony was 103,862 square miles. The present area of New Zealand, which acquired responsible government on 7 May 1856 and Dominion status on 26 September 1907, exclusive of island territories but including minor islands, is 103,736 square miles.

#### **Victoria**

In 1851 the 'Port Phillip District' of New South Wales was constituted the colony of Victoria, 'bounded on the north and north-west by a straight line drawn from Cape Howe to the nearest source of the River Murray and thence by the course of that river to the eastern boundary of the colony of South Australia'. The area of the new colony was 87,884 square miles, and its separate existence took effect from 1 July 1851.

#### **Queensland**

The northern squatting districts of Moreton, Darling Downs, Burnett, Wide Bay, Maranoa, Leichhardt, and Port Curtis, together with the reputed county of Stanley, were granted an independent administration and formed into a distinct colony under the name of Queensland by letters patent dated 6 June 1859, although separation from New South Wales was not completed until 10 December of the same year. The territory comprised by the new colony was 'so much of the colony of New South Wales as lies northwards of a line commencing on the sea-coast at Point Danger in latitude about 28° 8' south, running westward along the Macpherson and Dividing Ranges and the Dumaresq River to the MacIntyre River, thence downward to the 29th parallel of South latitude, and following that parallel westerly to the 141st meridian of east longitude, which is the eastern boundary of South Australia, together with all the adjacent islands, their members, and appurtenances in the Pacific Ocean'. The area of the colony thus constituted was 554,300 square miles. By letters patent dated 13 March 1861, forwarded by the Colonial Secretary to the Governor of Queensland on 12 April 1862, the area of Queensland was increased by the annexation of 'so much of the colony of New South Wales as lies to the northward of the 26th parallel of south latitude, and between 141st and 138th meridians of east longitude, together with all the adjacent islands, their members, and appurtenances, in the Gulf of Carpentaria'. With this addition the area of Queensland became 670,500 square miles. Following a thorough revision of the area of each local government area of Queensland, based on the most recent maps available, the Surveyor-General in 1958 determined the area of Queensland as 667,000 square miles—a reduction of 3,500 square miles from the area previously determined.

### **The establishment of the Commonwealth of Australia**

#### **Federation**

On 1 January 1901 the colonies mentioned, with the exception of New Zealand, were federated under the name of the 'Commonwealth of Australia', the designation of 'Colonies'—except in the case of the Northern Territory, to which the designation 'Territory' applied—being at the same time changed to that of 'States'.

**Transfer of the Northern Territory to the Commonwealth**

On 7 December 1907 the Commonwealth and the State of South Australia entered into an agreement for the transfer of the Northern Territory to the Commonwealth, subject to approval by the Parliaments of the Commonwealth and the State. This approval was given by the South Australian Parliament under The Northern Territory Surrender Act, 1907 and by the Commonwealth Parliament under the *Northern Territory Acceptance Act* 1910. The Territory was formally transferred to the Commonwealth on 1 January 1911, and became the Northern Territory of Australia.

By Imperial Order in Council dated 23 July 1931 Ashmore Islands, known as Middle, East and West Islands, and Cartier Island, situated in the Indian Ocean off the north-west coast of Australia, were placed under the authority of the Commonwealth. The islands were accepted by the Commonwealth on 10 May 1934, in the *Ashmore and Cartier Islands Acceptance Act* 1933, under the name of the Territory of Ashmore and Cartier Islands. The Act authorised the Governor of Western Australia to make ordinances having the force of law in and in relation to the Territory. An amendment to the Act in July 1938 annexed the islands to the Northern Territory, whose laws, ordinances, and regulations, wherever applicable, thereupon applied.

The area of Ashmore Reef is approximately 60 square miles (to the limit of the reef), and it is situated 220 statute miles off the western coast of Australia and 520 statute miles west of Darwin. Cartier Island is approximately 17 square miles in area (to the limit of the reef), and is situated 184 statute miles off the western coast of Australia and 490 statute miles west of Darwin.

**Transfer of the Australian Capital Territory to the Commonwealth**

On 18 October 1909 the Commonwealth and the State of New South Wales entered into an agreement for the surrender to and acceptance by the Commonwealth of an area of 911 square miles as the Seat of Government of the Commonwealth. In December 1909, Acts were passed by the Commonwealth and New South Wales Parliaments approving the agreement, and on 5 December 1910 a proclamation was issued vesting the Territory in the Commonwealth on and from 1 January 1911. By the *Jervis Bay Territory Acceptance Act* 1915 an area of 28 square miles at Jervis Bay, surrendered by New South Wales according to an agreement made in 1913, was accepted by the Commonwealth, and was transferred as from 4 September 1915.

**Present composition of the Commonwealth**

Following revision of the areas of Tasmania, Queensland and the Northern Territory, as mentioned on pages 3 and 4, the total area of the Commonwealth of Australia has been determined as 2,967,909 square miles. The years in which the respective areas were annexed, the years of first permanent settlement, and the years in which responsible government was granted to the Colonies, and the present areas of the several States and Territories and of the Commonwealth are shown below.

**THE COMMONWEALTH OF AUSTRALIA: COMPONENT STATES AND TERRITORIES**

<i>State or Territory</i>	<i>Year of annexation</i>	<i>Year of first permanent settlement</i>	<i>Year of formation into separate Colony or Territory</i>	<i>Year in which responsible government was granted</i>	<i>Present area in square miles</i>
New South Wales . . . . .	1770	1788	1786	1855	309,433
Victoria . . . . .	1770	1834	1851	1855	87,884
Queensland . . . . .	1770	1824	1859	(a) 1859	667,000
South Australia . . . . .	1788	1836	1834	1856	380,070
Western Australia . . . . .	1829	1829	1829	1890	975,920
Tasmania . . . . .	1788	1803	1825	1855	26,383
Northern Territory . . . . .	..	..	(b) 1863	..	520,280
Australian Capital Territory . . . . .	..	..	(c) 1911	..	939
<b>Commonwealth of Australia . . . . .</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>(d)</b>	<b>2,967,909</b>

(a) As part of New South Wales in 1855; as a separate colony in 1859. (b) Previously part of New South Wales then brought under the jurisdiction of South Australia in 1863—transferred to the Commonwealth in 1911. (c) Previously part of New South Wales. (d) Constituted as from 1 January 1901.



## The Constitution of the Commonwealth

Information regarding the development of the Constitutions of the various Colonies (now States), together with a brief history of the federal movement in Australia, was embodied in this chapter in issues of the Year Book up to and including No. 22.

### Commonwealth Constitution Act

The Commonwealth of Australia Constitution Act, 63 and 64 Vict., Chapter 12, namely: 'An Act to constitute the Commonwealth of Australia', as amended by the *Constitution Alteration (Senate Elections)* 1906, the *Constitution Alteration (State Debts)* 1909, the *Constitution Alteration (State Debts)* 1928, the *Constitution Alteration (Social Services)* 1946, and the *Constitution Alteration (Aboriginals)* 1967, is given *in extenso* hereunder, and the text contains all the alterations of the Constitution which have been made up to and including 31 December 1971.

### THE COMMONWEALTH OF AUSTRALIA CONSTITUTION ACT. 63 & 64 VICT., CHAPTER 12.

*An Act to constitute the Commonwealth of Australia. (9th July, 1900.)*

**W**HEREAS the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, humbly relying on the blessing of Almighty God, have agreed to unite in one indissoluble Federal Commonwealth under the Crown of the United Kingdom of Great Britain and Ireland, and under the Constitution hereby established:

And whereas it is expedient to provide for the admission into the Commonwealth of other Australasian colonies and possessions of the Queen:

Be it therefore enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled and by the authority of the same, as follows:—

1. This Act may be cited as the Commonwealth of Australia Constitution Act.
2. The provisions of this Act referring to the Queen shall extend to Her Majesty's heirs and successors in the sovereignty of the United Kingdom.
3. It shall be lawful for the Queen, with the advice of the Privy Council, to declare by proclamation that, on and after a day therein appointed, not being later than one year after the passing of this Act, the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, and also, if Her Majesty is satisfied that the people of Western Australia have agreed thereto, of Western Australia, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia. But the Queen may, at any time after the proclamation, appoint a Governor-General for the Commonwealth.
4. The Commonwealth shall be established, and the Constitution of the Commonwealth shall take effect, on and after the day so appointed. But the Parliaments of the several colonies may at any time after the passing of this Act make any such laws, to come into operation on the day so appointed, as they might have made if the Constitution had taken effect at the passing of this Act.
5. This Act, and all laws made by the Parliament of the Commonwealth under the Constitution, shall be binding on the courts, judges, and people of every State and of every part of the Commonwealth, notwithstanding anything in the laws of any State: and the laws of the Commonwealth shall be in force on all British ships, the Queen's ships of war excepted, whose first port of clearance and whose port of destination are in the Commonwealth.
6. "The Commonwealth" shall mean the Commonwealth of Australia as established under this Act.  
"The States" shall mean such of the colonies of New South Wales, New Zealand, Queensland, Tasmania, Victoria, Western Australia, and South Australia, including the northern territory of South Australia, as for the time being are parts of the Commonwealth, and such colonies or territories as may be admitted into or established by the Commonwealth as States; and each of such parts of the Commonwealth shall be called "a State."  
"Original States" shall mean such States as are parts of the Commonwealth at its establishment.
7. The Federal Council of Australasia Act, 1885, is hereby repealed, but so as not to affect any laws passed by the Federal Council of Australasia and in force at the establishment of the Commonwealth.  
Any such law may be repealed as to any State by the Parliament of the Commonwealth, or as to any colony not being a State by the Parliament thereof.

8. After the passing of this Act the Colonial Boundaries Act, 1895, shall not apply to any colony which becomes a State of the Commonwealth; but the Commonwealth shall be taken to be a self-governing colony for the purposes of that Act.

9. The Constitution of the Commonwealth shall be as follows:—

### THE CONSTITUTION.

This Constitution is divided as follows:—

- Chapter I.—The Parliament:
  - Part I.—General:
  - Part II.—The Senate:
  - Part III.—The House of Representatives:
  - Part IV.—Both Houses of the Parliament:
  - Part V.—Powers of the Parliament:
- Chapter II.—The Executive Government:
- Chapter III.—The Judicature:
- Chapter IV.—Finance and Trade:
- Chapter V.—The States:
- Chapter VI.—New States:
- Chapter VII.—Miscellaneous:
- Chapter VIII.—Alteration of the Constitution.
- The Schedule.

### CHAPTER I.—THE PARLIAMENT.

#### PART I.—GENERAL.

1. The legislative power of the Commonwealth shall be vested in a Federal Parliament, which shall consist of the Queen, a Senate, and a House of Representatives, and which is hereinafter called “The Parliament”, or “The Parliament of the Commonwealth”.

2. A Governor-General appointed by the Queen shall be Her Majesty’s representative in the Commonwealth, and shall have and may exercise in the Commonwealth during the Queen’s pleasure, but subject to this Constitution, such powers and functions of the Queen as Her Majesty may be pleased to assign to him.

3. There shall be payable to the Queen out of the Consolidated Revenue Fund of the Commonwealth, for the salary of the Governor-General, an annual sum which, until the Parliament otherwise provides, shall be ten thousand pounds.

The salary of a Governor-General shall not be altered during his continuance in office.

4. The provisions of this Constitution relating to the Governor-General extend and apply to the Governor-General for the time being, or such person as the Queen may appoint to administer the Government of the Commonwealth; but no such person shall be entitled to receive any salary from the Commonwealth in respect of any other office during his administration of the Government of the Commonwealth.

5. The Governor-General may appoint such times for holding the sessions of the Parliament as he thinks fit, and may also from time to time, by Proclamation or otherwise, prorogue the Parliament, and may in like manner dissolve the House of Representatives.

After any general election the Parliament shall be summoned to meet not later than thirty days after the day appointed for the return of the writs.

The Parliament shall be summoned to meet not later than six months after the establishment of the Commonwealth.

6. There shall be a session of the Parliament once at least in every year, so that twelve months shall not intervene between the last sitting of the Parliament in one session and its first sitting in the next session.

#### PART II.—THE SENATE.

7. The Senate shall be composed of senators for each State, directly chosen by the people of the State, voting, until the Parliament otherwise provides, as one electorate.

But until the Parliament of the Commonwealth otherwise provides, the Parliament of the State of Queensland, if that State be an Original State, may make laws dividing the State into divisions and determining the number of senators to be chosen for each division, and in the absence of such provision the State shall be one electorate.

Until the Parliament otherwise provides there shall be six senators for each Original State.\* The Parliament may make laws increasing or diminishing the number of senators for each State, but so that equal representation of the several Original States shall be maintained and that no Original State shall have less than six senators.

The senators shall be chosen for a term of six years, and the names of the senators chosen for each State shall be certified by the Governor to the Governor-General.

8. The qualification of electors of senators shall be in each State that which is prescribed by this Constitution, or by the Parliament, as the qualification for electors of members of the House of Representatives; but in the choosing of senators each elector shall vote only once.

9. The Parliament of the Commonwealth may make laws prescribing the method of choosing senators, but so that the method shall be uniform for all the States. Subject to any such law, the Parliament of each State may make laws prescribing the method of choosing the senators for that State.

The Parliament of a State may make laws determining the times and places of elections of senators for the State.

10. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State, for the time being, relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections of senators for the State.

11. The Senate may proceed to the despatch of business, notwithstanding the failure of any State to provide for its representation in the Senate.

12. The Governor of any State may cause writs to be issued for elections of senators for the State. In case of the dissolution of the Senate the writs shall be issued within ten days from the proclamation of such dissolution.

13. As soon as may be after the Senate first meets, and after each first meeting of the Senate following a dissolution thereof, the Senate shall divide the senators chosen for each State into two classes, as nearly equal in numbers as practicable; and the places of the senators of the first class shall become vacant at the expiration of [the third year] *three years*,† and the places of those of the second class at the expiration of [the sixth year] *six years*,† from the beginning of their term of service; and afterwards the places of senators shall become vacant at the expiration of six years from the beginning of their term of service.

The election to fill vacant places shall be made [in the year at the expiration of which] *within one year before*† the places are to become vacant.

For the purposes of this section the term of service of a senator shall be taken to begin on the first day of [January] *July*† following the day of his election, except in the cases of the first election and of the election next after any dissolution of the Senate, when it shall be taken to begin on the first day of [January] *July*† preceding the day of his election.

14. Whenever the number of senators for a State is increased or diminished, the Parliament of the Commonwealth may make such provision for the vacating of the places of senators for the State as it deems necessary to maintain regularity in the rotation.

15. If the place of a senator becomes vacant before the expiration of his term of service, the House of Parliament of the State for which he was chosen shall, sitting and voting together, choose a person to hold the place until the expiration of the term, or until the election of a successor as hereinafter provided, whichever first happens. But if the Houses of Parliament of the State are not in session at the time when the vacancy is notified, the Governor of the State, with the advice of the Executive Council thereof, may appoint a person to hold the place until the expiration of fourteen days after the beginning of the next session of the Parliament of the State, or until the election of a successor, whichever first happens.

At the next general election of members of the House of Representatives, or at the next election of senators for the State, whichever first happens, a successor shall, if the term has not then expired, be chosen to hold the place from the date of his election until the expiration of the term.

The name of any senator so chosen or appointed shall be certified by the Governor of the State to the Governor-General.

16. The qualifications of a senator shall be the same as those of a member of the House of Representatives.

\* The Parliament has otherwise provided, by means of the *Representation Act* 1948, that the number of senators shall be ten for each State from the first meeting of Parliament after the first dissolution of the House of Representatives occurring after the commencement of the Act (18 May 1948).

† As amended by Section 2 of the *Constitution Alteration (Senate Elections)* 1906. The words in square brackets have been repealed; amendments are shown in italics.



17. The Senate shall, before proceeding to the despatch of any other business, choose a senator to be the President of the Senate; and as often as the office of President becomes vacant the Senate shall again choose a senator to be the President.

The President shall cease to hold his office if he ceases to be a senator. He may be removed from office by a vote of the Senate, or he may resign his office or his seat by writing addressed to the Governor-General.

18. Before or during any absence of the President, the Senate may choose a senator to perform his duties in his absence.

19. A senator may, by writing addressed to the President, or to the Governor-General if there is no President or if the President is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

20. The place of a senator shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the Senate, fails to attend the Senate.

21. Whenever a vacancy happens in the Senate, the President, or if there is no President or if the President is absent from the Commonwealth, the Governor-General, shall notify the same to the Governor of the State in the representation of which the vacancy has happened.

22. Until the Parliament otherwise provides, the presence of at least one third of the whole number of the senators shall be necessary to constitute a meeting of the Senate for the exercise of its powers.

23. Questions arising in the Senate shall be determined by a majority of votes, and each senator shall have one vote. The President shall in all cases be entitled to a vote; and when the votes are equal the question shall pass in the negative.

### PART III.—THE HOUSE OF REPRESENTATIVES.

24. The House of Representatives shall be composed of members directly chosen by the people of the Commonwealth, and the number of such members shall be, as nearly as practicable, twice the number of the senators.

The number of members chosen in the several States shall be in proportion to the respective numbers of their people, and shall, until the Parliament otherwise provides, be determined, whenever necessary, in the following manner:—

- (i) A quota shall be ascertained by dividing the number of the people of the Commonwealth, as shown by the latest statistics of the Commonwealth, by twice the number of the senators;
- (ii) The number of members to be chosen in each State shall be determined by dividing the number of the people of the State, as shown by the latest statistics of the Commonwealth, by the quota; and if on such division there is a remainder greater than one-half of the quota, one more member shall be chosen in the State.

But not withstanding anything in this section, five members at least shall be chosen in each Original State.

25. For the purpose of the last section, if by the law of any State all persons of any race are disqualified from voting at elections for the more numerous House of the Parliament of the State, then, in reckoning the number of the people of the State or of the Commonwealth, persons of that race resident in that State shall not be counted.

26. Notwithstanding anything in section twenty-four, the number of members to be chosen in each State at the first election shall be as follows:—

New South Wales . . . .	twenty-three;	South Australia . . . .	six;
Victoria . . . . .	twenty;	Tasmania . . . . .	five;
Queensland . . . . .	eight;		

Provided that if Western Australia is an Original State, the numbers shall be as follows:—

New South Wales . . . .	twenty-six;	South Australia . . . .	seven;
Victoria . . . . .	twenty-three;	Western Australia . . . .	five;
Queensland . . . . .	nine;	Tasmania . . . . .	five.

27. Subject to this Constitution, the Parliament may make laws for increasing or diminishing the number of the members of the House of Representatives.

28. Every House of Representatives shall continue for three years from the first meeting of the House, and no longer, but may be sooner dissolved by the Governor-General.

29. Until the Parliament of the Commonwealth otherwise provides, the Parliament of any State may make laws for determining the divisions in each State for which members of the House of Representatives may be chosen, and the number of members to be chosen for each division. A division shall not be formed out of parts of different States.

In the absence of other provision, each State shall be one electorate.

30. Until the Parliament otherwise provides, the qualification of electors of members of the House of Representatives shall be in each State that which is prescribed by the law of the State as the qualification of electors of the more numerous House of Parliament of the State; but in the choosing of members each elector shall vote only once.\*

31. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State for the time being relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections in the State of members of the House of Representatives.

32. The Governor-General in Council may cause writs to be issued for general elections of members of the House of Representatives.

After the first general election, the writs shall be issued within ten days from the expiry of a House of Representatives or from the proclamation of a dissolution thereof.

33. Whenever a vacancy happens in the House of Representatives, the Speaker shall issue his writ for the election of a new member, or if there is no Speaker or if he is absent from the Commonwealth the Governor-General in Council may issue the writ.

34. Until the Parliament otherwise provides, the qualifications of a member of the House of Representatives shall be as follows:—

- (i) He must be of the full age of twenty-one years, and must be an elector entitled to vote at the election of members of the House of Representatives, or a person qualified to become such elector, and must have been for three years at the least a resident within the limits of the Commonwealth as existing at the time when he is chosen:
- (ii) He must be a subject of the Queen, either natural-born or for at least five years naturalized under a law of the United Kingdom, or of a Colony which has become or becomes a State, or of the Commonwealth, or of a State.†

35. The House of Representatives shall, before proceeding to the despatch of any other business, choose a member to be the Speaker of the House, and as often as the office of Speaker becomes vacant the House shall again choose a member to be the Speaker.

The Speaker shall cease to hold his office if he ceases to be a member. He may be removed from office by a vote of the House, or he may resign his office or his seat by writing addressed to the Governor-General.

36. Before or during any absence of the Speaker, the House of Representatives may choose a member to perform his duties in his absence.

37. A member may by writing addressed to the Speaker, or to the Governor-General if there is no Speaker or if the Speaker is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

38. The place of a member shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the House, fails to attend the House.

39. Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the members of the House of Representatives shall be necessary to constitute a meeting of the House for the exercise of its powers.

40. Questions arising in the House of Representatives shall be determined by a majority of votes other than that of the Speaker. The Speaker shall not vote unless the numbers are equal, and then he shall have a casting vote.

#### PART IV.—BOTH HOUSES OF THE PARLIAMENT.

41. No adult person who has or acquires a right to vote at elections for the more numerous House of the Parliament of a State, shall, while the right continues, be prevented by any law of the Commonwealth from voting at elections for either House of the Parliament of the Commonwealth.

\* The Parliament has otherwise provided, by means of the *Commonwealth Electoral Act 1918-1965*, Sections 39 and 39A (repealing an earlier provision made by the *Commonwealth Franchise Act 1902*). For present qualifications see Chapter 3, General Government.

† The Parliament has otherwise provided, by means of the *Commonwealth Electoral Act 1918-1965*, Section 69. For present qualifications see Chapter 3, General Government.

42. Every senator and every member of the House of Representatives shall before taking his seat make and subscribe before the Governor-General, or some person authorized by him, an oath or affirmation of allegiance in the form set forth in the schedule to this Constitution.

43. A member of either House of the Parliament shall be incapable of being chosen or of sitting as a member of the other House.

44. Any person who—

- (i) Is under any acknowledgment of allegiance, obedience, or adherence to a foreign power, or is a subject or a citizen or entitled to the rights or privileges of a subject or a citizen of a foreign power: or
- (ii) Is attainted of treason, or has been convicted and is under sentence, or subject to be sentenced, for any offence punishable under the law of the Commonwealth or of a State by imprisonment for one year or longer: or
- (iii) Is an undischarged bankrupt or insolvent: or
- (iv) Holds any office of profit under the Crown, or any pension payable during the pleasure of the Crown out of any of the revenues of the Commonwealth: or
- (v) Has any direct or indirect pecuniary interest in any agreement with the Public Service of the Commonwealth otherwise than as a member and in common with the other members of an incorporated company consisting of more than twenty-five persons:

shall be incapable of being chosen or of sitting as a senator or a member of the House of Representatives.

But sub-section (iv) does not apply to the office of any of the Queen's Ministers of State for the Commonwealth, or of any of the Queen's Ministers for a State, or to the receipt of pay, half-pay, or a pension by any person as an officer or member of the Queen's navy or army, or to the receipt of pay as an officer or member of the naval or military forces of the Commonwealth by any person whose services are not wholly employed by the Commonwealth.

45. If a senator or member of the House of Representatives—

- (i) Becomes subject to any of the disabilities mentioned in the last preceding section: or
- (ii) Takes the benefit, whether by assignment, composition, or otherwise, of any law relating to bankrupt or insolvent debtors: or
- (iii) Directly or indirectly takes or agrees to take any fee or honorarium for services rendered to the Commonwealth, or for services rendered in the Parliament to any person or State:

his place shall thereupon become vacant.

46. Until the Parliament otherwise provides, any person declared by this Constitution to be incapable of sitting as a senator or as a member of the House of Representatives shall, for every day on which he so sits, be liable to pay the sum of one hundred pounds to any person who sues for it in any court of competent jurisdiction.

47. Until the Parliament otherwise provides, any question respecting the qualification of a senator or of a member of the House of Representatives, or respecting a vacancy in either House of the Parliament, and any question of a disputed election to either House shall be determined by the House in which the question arises.

48. Until the Parliament otherwise provides, each senator and each member of the House of Representatives shall receive an allowance of four hundred pounds a year, to be reckoned from the day on which he takes his seat.\*

49. The powers, privileges, and immunities of the Senate and of the House of Representatives, and of the members and the committees of each House, shall be such as are declared by the Parliament, and until declared shall be those of the Commons House of Parliament of the United Kingdom, and of its members and committees, at the establishment of the Commonwealth.

50. Each House of the Parliament may make rules and orders with respect to—

- (i) The mode in which its powers, privileges, and immunities may be exercised and upheld;
- (ii) The order and conduct of its business and proceedings either separately or jointly with the other House.

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\* The Parliamentary allowance has been varied from time to time. For current allowances, see Chapter 3, General Government.



## PART V.—POWERS OF THE PARLIAMENT.\*

51. The Parliament shall, subject to this Constitution, have power to make laws for the peace, order, and good government of the Commonwealth with respect to:—

- (i) Trade and commerce with other countries, and among the States:
- (ii) Taxation; but so as not to discriminate between States or parts of States:
- (iii) Bounties on the production or export of goods, but so that such bounties shall be uniform throughout the Commonwealth:
- (iv) Borrowing money on the public credit of the Commonwealth:
- (v) Postal, telegraphic, telephonic, and other like services:
- (vi) The naval and military defence of the Commonwealth and of the several States, and the control of the forces to execute and maintain the laws of the Commonwealth:
- (vii) Lighthouses, lightships, beacons and buoys:
- (viii) Astronomical and meteorological observations:
- (ix) Quarantine:
- (x) Fisheries in Australian waters beyond territorial limits:
- (xi) Census and statistics:
- (xii) Currency, coinage, and legal tender:
- (xiii) Banking, other than State banking; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money:
- (xiv) Insurance, other than State insurance; also State insurance extending beyond the limits of the State concerned.
- (xv) Weights and measures:
- (xvi) Bills of exchange and promissory notes:
- (xvii) Bankruptcy and insolvency:
- (xviii) Copyrights, patents of inventions and designs, and trade marks:
- (xix) Naturalization and aliens:
- (xx) Foreign corporations, and trading or financial corporations formed within the limits of the Commonwealth:
- (xxi) Marriage:
- (xxii) Divorce and matrimonial causes; and in relation thereto, parental rights, and the custody and guardianship of infants:
- (xxiii) Invalid and old-age pensions:
- (xxiiiA) † *The provision of maternity allowances, widows' pensions, child endowment, unemployment, pharmaceutical, sickness and hospital benefits, medical and dental services (but not so as to authorize any form of civil conscription), benefits to students and family allowances:*
- (xxiv) The service and execution throughout the Commonwealth of the civil and criminal process and the judgments of the courts of the States:
- (xxv) The recognition throughout the Commonwealth of the laws, the public Acts and records, and the judicial proceedings of the States:
- (xxvi) The people of any race [other than the aboriginal race in any State]‡ for whom it is deemed necessary to make special laws:
- (xxvii) Immigration and emigration:
- (xxviii) The influx of criminals:
- (xxix) External affairs:
- (xxx) The relations of the Commonwealth with the islands of the Pacific.
- (xxxi) The acquisition of property on just terms from any State or person for any purpose in respect of which the Parliament has power to make laws:
- (xxxii) The control of railways with respect to transport for the naval and military purposes of the Commonwealth:

\* Particulars of proposed laws which were submitted to referendums are referred to in Chapter 3, General Government, of this Year Book.

† Under Section 2 of the *Constitution Alteration (Social Services)* 1946, the Constitution was amended by the insertion of this paragraph.

‡ Under Section 2 of the *Constitution Alteration (Aboriginals)* 1967, the words in square brackets were omitted.

- (xxxiii) The acquisition, with the consent of a State, of any railways of the State on terms arranged between the Commonwealth and the State:
- (xxxiv) Railway construction and extension in any State with the consent of that State:
- (xxxv) Conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State:
- (xxxvi) Matters in respect of which this Constitution makes provision until the Parliament otherwise provides:
- (xxxvii) Matters referred to the Parliament of the Commonwealth by the Parliament or Parliaments of any State or States, but so that the law shall extend only to States by whose Parliaments the matter is referred, or which afterwards adopt the law:
- (xxxviii) The exercise within the Commonwealth, at the request or with the concurrence of the Parliaments of all the States directly concerned, of any power which can at the establishment of this Constitution be exercised only by the Parliament of the United Kingdom or by the Federal Council of Australasia:
- (xxxix) Matters incidental to the execution of any power vested by this Constitution in the Parliament or in either House thereof, or in the Government of the Commonwealth, or in the Federal Judicature, or in any department or officer of the Commonwealth.

52. The Parliament shall, subject to this Constitution, have exclusive power to make laws for the peace, order, and good government of the Commonwealth with respect to—

- (i) The seat of Government of the Commonwealth, and all places acquired by the Commonwealth for public purposes:
- (ii) Matters relating to any department of the public service the control of which is by this Constitution transferred to the Executive Government of the Commonwealth:
- (iii) Other matters declared by this Constitution to be within the exclusive power of the Parliament.

53. Proposed laws appropriating revenue or moneys, or imposing taxation, shall not originate in the Senate. But a proposed law shall not be taken to appropriate revenue or moneys, or to impose taxation, by reason only of its containing provisions for the imposition or appropriation of fines or other pecuniary penalties, or for the demand or payment or appropriation of fees for licences, or fees for services under the proposed law.

The Senate may not amend proposed laws imposing taxation, or proposed laws appropriating revenue or moneys for the ordinary annual services of the Government.

The Senate may not amend any proposed law so as to increase any proposed charge or burden on the people.

The Senate may at any stage return to the House of Representatives any proposed law which the Senate may not amend, requesting, by message, the omission or amendment of any items or provisions therein. And the House of Representatives may, if it thinks fit, make any of such omissions or amendments, with or without modifications.

Except as provided in this section, the Senate shall have equal power with the House of Representatives in respect of all proposed laws.

54. The proposed law which appropriates revenue or moneys for the ordinary annual services of the Government shall deal only with such appropriation.

55. Laws imposing taxation shall deal only with the imposition of taxation, and any provision therein dealing with any other matter shall be of no effect.

Laws imposing taxation, except laws imposing duties of customs or of excise, shall deal with one subject of taxation only; but laws imposing duties of customs shall deal with duties of customs only, and laws imposing duties of excise shall deal with duties of excise only.

56. A vote, resolution, or proposed law for the appropriation of revenue or moneys shall not be passed unless the purpose of the appropriation has in the same session been recommended by message of the Governor-General to the House in which the proposal originated.

57. If the House of Representatives passes any proposed law, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, and if after an interval of three months the House of Representatives, in the same or the next session, again passes the proposed law with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may dissolve the Senate and the House of Representatives simultaneously. But such dissolution shall not take place within six months before the date of expiry of the House of Representatives by effluxion of time.

If after such dissolution the House of Representatives again passes the proposed law, with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may convene a joint sitting of the members of the Senate and of the House of Representatives.

The members present at the joint sitting may deliberate and shall vote together upon the proposed law as last proposed by the House of Representatives, and upon amendments, if any, which have been made therein by one House and not agreed to by the other, and any such amendments which are affirmed by an absolute majority of the total number of the members of the Senate and House of Representatives shall be taken to have been carried, and if the proposed law, with the amendments, if any, so carried is affirmed by an absolute majority of the total number of the members of the Senate and House of Representatives, it shall be taken to have been duly passed by both Houses of the Parliament, and shall be presented to the Governor-General for the Queen's assent.

58. When a proposed law passed by both Houses of the Parliament is presented to the Governor-General for the Queen's assent he shall declare, according to his discretion, but subject to this Constitution, that he assents in the Queen's name, or that he withholds assent, or that he reserves the law for the Queen's pleasure.

The Governor-General may return to the House in which it originated any proposed law so presented to him, and may transmit therewith any amendments which he may recommend, and the Houses may deal with the recommendation.

59. The Queen may disallow any law within one year from the Governor-General's assent, and such disallowance on being made known by the Governor-General by speech or message to each of the Houses of the Parliament, or by Proclamation, shall annul the law from the day when the disallowance is so made known.

60. A proposed law reserved for the Queen's pleasure shall not have any force unless and until within two years from the day on which it was presented to the Governor-General for the Queen's assent the Governor-General makes known, by speech or message to each of the Houses of the Parliament, or by Proclamation, that it has received the Queen's assent.

## CHAPTER II.—THE EXECUTIVE GOVERNMENT.

61. The executive power of the Commonwealth is vested in the Queen and is exercisable by the Governor-General as the Queen's representative, and extends to the execution and maintenance of this Constitution, and of the laws of the Commonwealth.

62. There shall be a Federal Executive Council to advise the Governor-General in the government of the Commonwealth, and the members of the Council shall be chosen and summoned by the Governor-General and sworn as Executive Councillors, and shall hold office during his pleasure.

63. The provisions of this Constitution referring to the Governor-General in Council shall be construed as referring to the Governor-General acting with the advice of the Federal Executive Council.

64. The Governor-General may appoint officers to administer such departments of State of the Commonwealth as the Governor-General in Council may establish.

Such officers shall hold office during the pleasure of the Governor-General. They shall be members of the Federal Executive Council, and shall be the Queen's Ministers of State for the Commonwealth.

After the first general election no Minister of State shall hold office for a longer period than three months unless he is or becomes a senator or a member of the House of Representatives.

65. Until the Parliament otherwise provides, the Ministers of State shall not exceed seven in number, and shall hold such offices as the Parliament prescribes, or, in the absence of provision, as the Governor-General directs.\*

66. There shall be payable to the Queen, out of the Consolidated Revenue Fund of the Commonwealth, for the salaries of the Ministers of State, an annual sum which, until the Parliament otherwise provides, shall not exceed twelve thousand pounds a year.\*

67. Until the Parliament otherwise provides, the appointment and removal of all other officers of the Executive Government of the Commonwealth shall be vested in the Governor-General in Council, unless the appointment is delegated by the Governor-General in Council or by a law of the Commonwealth to some other authority.

\* The number of Ministers of State and the annual appropriation for their salaries have been varied from time to time. For current particulars, see Chapter 3, General Government.



68. The command in chief of the naval and military forces of the Commonwealth is vested in the Governor-General as the Queen's representative.

69. On a date or dates to be proclaimed by the Governor-General after the establishment of the Commonwealth the following departments of the public service in each State shall become transferred to the Commonwealth:—

Posts, telegraphs, and telephones:	Lighthouses, lightships, beacons and buoys:
Naval and military defence:	Quarantine.

But the departments of customs and of excise in each State shall become transferred to the Commonwealth on its establishment.

70. In respect of matters which, under this Constitution, pass to the Executive Government of the Commonwealth, all powers and functions which at the establishment of the Commonwealth are vested in the Governor of a Colony, or in the Governor of a Colony with the advice of his Executive Council, or in any authority of a Colony, shall vest in the Governor-General, or in the Governor-General in Council, or in the authority exercising similar powers under the Commonwealth, as the case requires.

### CHAPTER III.—THE JUDICATURE.

71. The judicial power of the Commonwealth shall be vested in a Federal Supreme Court, to be called the High Court of Australia, and in such other federal courts as the Parliament creates, and in such other courts as it invests with federal jurisdiction. The High Court shall consist of a Chief Justice, and so many other Justices, not less than two, as the Parliament prescribes.\*

72. The Justices of the High Court and of the other Courts created by the Parliament—

- (i) Shall be appointed by the Governor-General in Council:
- (ii) Shall not be removed except by the Governor-General in Council, on an address from both Houses of the Parliament in the same session, praying for such removal on the ground of proved misbehaviour or incapacity:
- (iii) Shall receive such remuneration as the Parliament may fix; but the remuneration shall not be diminished during their continuance in office.†

73. The High Court shall have jurisdiction, with such exceptions and subject to such regulations as the Parliament prescribes, to hear and determine appeals from all judgments, decrees, orders, and sentences—

- (i) Of any Justice or Justices exercising the original jurisdiction of the High Court:
- (ii) Of any other federal court, or court exercising federal jurisdiction; or of the Supreme Court of any State, or of any other court of any State from which at the establishment of the Commonwealth an appeal lies to the Queen in Council:
- (iii) Of the Inter-State Commission, but as to questions of law only:

and the judgment of the High Court in all such cases shall be final and conclusive.

But no exception or regulation prescribed by the Parliament shall prevent the High Court from hearing and determining any appeal from the Supreme Court of a State in any matter in which at the establishment of the Commonwealth an appeal lies from such Supreme Court to the Queen in Council.

Until the Parliament otherwise provides, the conditions of and restrictions on appeals to the Queen in Council from the Supreme Courts of the several States shall be applicable to appeals from them to the High Court.

74. No appeal shall be permitted to the Queen in Council from a decision of the High Court upon any question, howsoever arising, as to the limits inter se of the Constitutional powers of the Commonwealth and those of any State or States, or as to the limits inter se of the Constitutional powers of any two or more States, unless the High Court shall certify that the question is one which ought to be determined by Her Majesty in Council.

The High Court may so certify if satisfied that for any special reason the certificate should be granted, and thereupon an appeal shall lie to Her Majesty in Council on the question without further leave.

Except as provided in this section, this Constitution shall not impair any right which the Queen may be pleased to exercise by virtue of Her Royal prerogative to grant special leave of appeal from the High Court to Her Majesty in Council. The Parliament may make laws limiting the matters in which such leave may be asked, but proposed laws containing any such limitation shall be reserved by the Governor-General for Her Majesty's pleasure.

\* The *Judiciary Act* 1903 provided for a Chief Justice and two other Justices, increased by subsequent amendments to six.

† The *Judiciary Act* 1903 provided for the payment of a salary of £3,500 (\$7,000) a year to the Chief Justice and of £3,000 (\$6,000) a year to each other Justice. These amounts have been varied from time to time.

75. In all matters—

- (i) Arising under any treaty:
- (ii) Affecting consuls or other representatives of other countries:
- (iii) In which the Commonwealth, or a person suing or being sued on behalf of the Commonwealth, is a party:
- (iv) Between States, or between residents of different States, or between a State and a resident of another State:
- (v) In which a writ of Mandamus or prohibition or an injunction is sought against an officer of the Commonwealth:

the High Court shall have original jurisdiction.

76. The Parliament may make laws conferring original jurisdiction on the High Court in any matter—

- (i) Arising under this Constitution, or involving its interpretation:
- (ii) Arising under any laws made by the Parliament:
- (iii) Of Admiralty and maritime jurisdiction:
- (iv) Relating to the same subject-matter claimed under the laws of different States.

77. With respect to any of the matters mentioned in the last two sections the Parliament may make laws—

- (i) Defining the jurisdiction of any federal court other than the High Court:
- (ii) Defining the extent to which the jurisdiction of any federal court shall be exclusive of that which belongs to or is invested in the courts of the States:
- (iii) Investing any court of a State with federal jurisdiction.

78. The Parliament may make laws conferring rights to proceed against the Commonwealth or a State in respect of matters within the limits of the judicial power.

79. The federal jurisdiction of any court may be exercised by such number of judges as the Parliament prescribes.

80. The trial on indictment of any offence against any law of the Commonwealth shall be by jury, and every such trial shall be held in the State where the offence was committed, and if the offence was not committed within any State the trial shall be held at such place or places as the Parliament prescribes.

#### CHAPTER IV.—FINANCE AND TRADE.

81. All revenues or moneys raised or received by the Executive Government of the Commonwealth shall form one Consolidated Revenue Fund, to be appropriated for the purposes of the Commonwealth in the manner and subject to the charges and liabilities imposed by this Constitution.

82. The costs, charges, and expenses incident to the collection, management, and receipt of the Consolidated Revenue Fund shall form the first charge thereon: and the revenue of the Commonwealth shall in the first instance be applied to the payment of the expenditure of the Commonwealth.

83. No money shall be drawn from the Treasury of the Commonwealth except under appropriation made by law.

But until the expiration of one month after the first meeting of the Parliament the Governor-General in Council may draw from the Treasury and expend such moneys as may be necessary for the maintenance of any department transferred to the Commonwealth and for the holding of the first elections for the Parliament.

84. When any department of the public service of a State becomes transferred to the Commonwealth, all officers of the department shall become subject to the control of the Executive Government of the Commonwealth.

Any such officer who is not retained in the service of the Commonwealth shall, unless he is appointed to some other office of equal emolument in the public service of the State, be entitled to receive from the State any pension, gratuity, or other compensation, payable under the law of the State on the abolition of his office.

Any such officer who is retained in the service of the Commonwealth shall preserve all his existing and accruing rights, and shall be entitled to retire from office at the time, and on the pension or retiring allowance, which would be permitted by the law of the State if his service with the Commonwealth were a continuation of his service with the State. Such pension or retiring allowance shall be paid to him by the Commonwealth; but the State shall pay to the Commonwealth a part thereof

to be calculated on the proportion which his term of service with the State bears to his whole term of service, and for the purpose of the calculation his salary shall be taken to be that paid to him by the State at the time of the transfer.

Any officer who is, at the establishment of the Commonwealth, in the public service of a State, and who is, by consent of the Governor of the State with the advice of the Executive Council thereof, transferred to the public service of the Commonwealth, shall have the same rights as if he had been an officer of a department transferred to the Commonwealth and were retained in the service of the Commonwealth.

85. When any department of the public service of a State is transferred to the Commonwealth—

- (i) All property of the State of any kind, used exclusively in connexion with the department, shall become vested in the Commonwealth; but, in the case of the departments controlling customs and excise bounties, for such time only as the Governor-General in Council may declare to be necessary;
- (ii) The Commonwealth may acquire any property of the State, of any kind used, but not exclusively used in connexion with the department; the value thereof shall, if no agreement can be made, be ascertained in, as nearly as may be, the manner in which the value of land, or of an interest in land, taken by the State for public purposes is ascertained under the law of the State in force at the establishment of the Commonwealth;
- (iii) The Commonwealth shall compensate the State for the value of any property passing to the Commonwealth under this section; if no agreement can be made as to the mode of compensation, it shall be determined under laws to be made by the Parliament;
- (iv) The Commonwealth shall, at the date of the transfer, assume the current obligations of the State in respect of the department transferred.

86. On the establishment of the Commonwealth, the collection and control of duties of customs and of excise, and the control of the payment of bounties, shall pass to the Executive Government of the Commonwealth.

87. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, of the net revenue of the Commonwealth from duties of customs and of excise not more than one-fourth shall be applied annually by the Commonwealth towards its expenditure.

The balance shall, in accordance with this Constitution, be paid to the several States, or applied towards the payment of interest on debts of the several States taken over by the Commonwealth.

88. Uniform duties of customs shall be imposed within two years after the establishment of the Commonwealth.

89. Until the imposition of uniform duties of customs—

- (i) The Commonwealth shall credit to each State the revenues collected therein by the Commonwealth.
- (ii) The Commonwealth shall debit to each State—
  - (a) The expenditure therein of the Commonwealth incurred solely for the maintenance or continuance, as at the time of transfer, of any department transferred from the State to the Commonwealth;
  - (b) The proportion of the State, according to the number of its people, in the other expenditure of the Commonwealth.
- (iii) The Commonwealth shall pay to each State month by month the balance (if any) in favour of the State.

90. On the imposition of uniform duties of customs the power of the Parliament to impose duties of customs and of excise, and to grant bounties on the production or export of goods, shall become exclusive.

On the imposition of uniform duties of customs all laws of the several States imposing duties of customs or of excise, or offering bounties on the production or export of goods, shall cease to have effect, but any grant of or agreement for any such bounty lawfully made by or under the authority of the Government of any State shall be taken to be good if made before the thirtieth day of June, one thousand eight hundred and ninety-eight, and not otherwise.

91. Nothing in this Constitution prohibits a State from granting any aid to or bounty on mining for gold, silver, or other metals, nor from granting, with the consent of both Houses of the Parliament of the Commonwealth expressed by resolution, any aid to or bounty on the production or export of goods.



92. On the imposition of uniform duties of customs, trade, commerce, and intercourse among the States, whether by means of internal carriage or ocean navigation, shall be absolutely free.

But notwithstanding anything in this Constitution, goods imported before the imposition of uniform duties of customs into any State, or into any Colony which, whilst the goods remain therein, becomes a State, shall, on thence passing into another State within two years after the imposition of such duties, be liable to any duty chargeable on the importation of such goods into the Commonwealth, less any duty paid in respect of the goods on their importation.

93. During the first five years after the imposition of uniform duties of customs, and thereafter until the Parliament otherwise provides—

- (i) The duties of customs chargeable on goods imported into a State and afterwards passing into another State for consumption, and the duties of excise paid on goods produced or manufactured in a State and afterwards passing into another State for consumption, shall be taken to have been collected not in the former but in the latter State:
- (ii) Subject to the last sub-section, the Commonwealth shall credit revenue, debit expenditure, and pay balances to the several States as prescribed for the period preceding the imposition of uniform duties of customs.

94. After five years from the imposition of uniform duties of customs, the Parliament may provide, on such basis as it deems fair, for the monthly payment to the several States of all surplus revenue of the Commonwealth.

95. Notwithstanding anything in this Constitution, the Parliament of the State of Western Australia, if that State be an Original State, may, during the first five years after the imposition of uniform duties of customs, impose duties of customs on goods passing into that State and not originally imported from beyond the limits of the Commonwealth; and such duties shall be collected by the Commonwealth.

But any duty so imposed on any goods shall not exceed during the first of such years the duty chargeable on the goods under the law of Western Australia in force at the imposition of uniform duties, and shall not exceed during the second, third, fourth, and fifth of such years respectively, four-fifths, three-fifths, two-fifths and one-fifth of such latter duty, and all duties imposed under this section shall cease at the expiration of the fifth year after the imposition of uniform duties.

If at any time during the five years the duty on any goods under this section is higher than the duty imposed by the Commonwealth on the importation of the like goods, then such higher duty shall be collected on the goods when imported into Western Australia from beyond the limits of the Commonwealth.

96. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, the Parliament may grant financial assistance to any State on such terms and conditions as the Parliament thinks fit.

97. Until the Parliament otherwise provides, the laws in force in any Colony which has become or becomes a State with respect to the receipt of revenue and the expenditure of money on account of the Government of the Colony, and the review and audit of such receipt and expenditure, shall apply to the receipt of revenue and the expenditure of money on account of the Commonwealth in the State in the same manner as if the Commonwealth, or the Government or an officer of the Commonwealth, were mentioned wherever the Colony, or the Government or an officer of the Colony is mentioned.

98. The power of the Parliament to make laws with respect to trade and commerce extends to navigation and shipping, and to railways the property of any State.

99. The Commonwealth shall not, by any law or regulation of trade, commerce, or revenue, give preference to one State or any part thereof over another State or any part thereof.

100. The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation.

101. There shall be an Inter-State Commission, with such powers of adjudication and administration as the Parliament deems necessary for the execution and maintenance, within the Commonwealth, of the provisions of this Constitution relating to trade and commerce, and of all laws made thereunder.

102. The Parliament may by any law with respect to trade or commerce forbid, as to railways, any preference or discrimination by any State, or by any authority constituted under a State, if such preference or discrimination is undue and unreasonable, or unjust to any State; due regard

being had to the financial responsibilities incurred by any State in connexion with the construction and maintenance of its railways. But no preference or discrimination shall, within the meaning of this section, be taken to be undue and unreasonable, or unjust to any State, unless so adjudged by the Inter-State Commission.

103. The Members of the Inter-State Commission—

- (i) Shall be appointed by the Governor-General in Council;
- (ii) Shall hold office for seven years, but may be removed within that time by the Governor-General in Council, on an address from both Houses of the Parliament in the same session praying for such removal on the ground of proved misbehaviour or incapacity;
- (iii) Shall receive such remuneration as the Parliament may fix; but such remuneration shall not be diminished during their continuance in office.

104. Nothing in this Constitution shall render unlawful any rate for the carriage of goods upon a railway, the property of a State, if the rate is deemed by the Inter-State Commission to be necessary for the development of the territory of the State, and if the rate applies equally to goods within the State and to goods passing into the State from other States.

105. The Parliament may take over from the States their public debts [as existing at the establishment of the Commonwealth],\* or a proportion thereof according to the respective numbers of their people as shown by the latest statistics of the Commonwealth, and may convert, renew, or consolidate such debts, or any part thereof; and the States shall indemnify the Commonwealth in respect of the debts taken over, and thereafter the interest payable in respect of the debts shall be deducted and retained from the portions of the surplus revenue of the Commonwealth payable to the several States, or if such surplus is insufficient, or if there is no surplus, then the deficiency or the whole amount shall be paid by the several States.

105A.†(1.) *The Commonwealth may make agreements with the States with respect to the public debts of the States, including—*

- (a) *the taking over of such debts by the Commonwealth;*
- (b) *the management of such debts;*
- (c) *the payment of interest and the provision and management of sinking funds in respect of such debts;*
- (d) *the consolidation, renewal, conversion, and redemption of such debts;*
- (e) *the indemnification of the Commonwealth by the States in respect of debts taken over by the Commonwealth; and*
- (f) *the borrowing of money by the States or by the Commonwealth, or by the Commonwealth for the States.*

(2.) *The Parliament may make laws for validating any such agreement made before the commencement of this section.*

(3.) *The Parliament may make laws for the carrying out by the parties thereto of any such agreement.*

(4.) *Any such agreement may be varied or rescinded by the parties thereto.*

(5.) *Every such agreement and any such variation thereof shall be binding upon the Commonwealth and the States parties thereto notwithstanding anything contained in this Constitution or the Constitution of the several States or in any law of the Parliament of the Commonwealth or of any State.*

(6.) *The powers conferred by this section shall not be construed as being limited in any way by the provisions of section one hundred and five of this Constitution.*

## CHAPTER V.—THE STATES.

106. The Constitution of each State of the Commonwealth shall, subject to this Constitution, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be, until altered in accordance with the Constitution of the State.

107. Every power of the Parliament of a Colony which has become or becomes a State, shall, unless it is by this Constitution exclusively vested in the Parliament of the Commonwealth or withdrawn from the Parliament of the State, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be.

\* Under Section 2 of the *Constitution Alteration (State Debts)* 1909, the words in square brackets were omitted.

† Under Section 2 of the *Constitution Alteration (State Debts)* 1928, the Constitution was amended by the insertion of this section.

108. Every law in force in a Colony which has become or becomes a State, and relating to any matter within the powers of the Parliament of the Commonwealth, shall, subject to this Constitution, continue in force in the State; and, until provision is made in that behalf by the Parliament of the Commonwealth, the Parliament of the State shall have such powers of alteration and of repeal in respect of any such law as the Parliament of the Colony had until the Colony became a State.

109. When a law of a State is inconsistent with a law of the Commonwealth, the latter shall prevail, and the former shall, to the extent of the inconsistency, be invalid.

110. The provisions of this Constitution relating to the Governor of a State extend and apply to the Governor for the time being of the State, or other chief executive officer or administrator of the government of the State.

111. The Parliament of a State may surrender any part of the State to the Commonwealth; and upon such surrender, and the acceptance thereof by the Commonwealth, such part of the State shall become subject to the exclusive jurisdiction of the Commonwealth.

112. After uniform duties of customs have been imposed, a State may levy on imports or exports, or on goods passing into or out of the State, such charges as may be necessary for executing the inspection laws of the State; but the net produce of all charges so levied shall be for the use of the Commonwealth; and any such inspection laws may be annulled by the Parliament of the Commonwealth.

113. All fermented, distilled, or other intoxicating liquids passing into any State or remaining therein for use, consumption, sale or storage, shall be subject to the laws of the State as if such liquids had been produced in the State.

114. A State shall not, without the consent of the Parliament of the Commonwealth, raise or maintain any naval or military force, or impose any tax on property of any kind belonging to the Commonwealth, nor shall the Commonwealth impose any tax on property of any kind belonging to a State.

115. A State shall not coin money, nor make anything but gold and silver coin a legal tender in payment of debts.

116. The Commonwealth shall not make any law for establishing any religion, or for imposing any religious observance, or for prohibiting the free exercise of any religion, and no religious test shall be required as a qualification for any office or public trust under the Commonwealth.

117. A subject of the Queen, resident in any State, shall not be subject in any other State to any disability or discrimination which would not be equally applicable to him if he were a subject of the Queen resident in such other State.

118. Full faith and credit shall be given, throughout the Commonwealth, to the laws, the public Acts and records, and the judicial proceedings of every State.

119. The Commonwealth shall protect every State against invasion and, on the application of the Executive Government of the State, against domestic violence.

120. Every State shall make provision for the detention in its prisons of persons accused or convicted of offences against the laws of the Commonwealth, and for the punishment of persons convicted of such offences, and the Parliament of the Commonwealth may make laws to give effect to this provision.

#### CHAPTER VI.—NEW STATES.

121. The Parliament may admit to the Commonwealth or establish new States, and may upon such admission or establishment make or impose such terms and conditions, including the extent of representation in either House of the Parliament, as it thinks fit.

122. The Parliament may make laws for the government of any territory surrendered by any State to and accepted by the Commonwealth, or of any territory placed by the Queen under the authority of and accepted by the Commonwealth, or otherwise acquired by the Commonwealth, and may allow the representation of such territory in either House of the Parliament to the extent and on the terms which it thinks fit.

123. The Parliament of the Commonwealth may, with the consent of the Parliament of a State, and the approval of the majority of the electors of the State voting upon the question, increase, diminish, or otherwise alter the limits of the State, upon such terms and conditions as may be agreed on, and may, with the like consent, make provision respecting the effect and operation of any increase or diminution or alteration of territory in relation to any State affected.

124. A new State may be formed by separation of territory from a State, but only with the consent of the Parliament thereof, and a new State may be formed by the union of two or more States or parts of States, but only with the consent of the Parliaments of the States affected.



## CHAPTER VII.—MISCELLANEOUS.

125. The seat of Government of the Commonwealth shall be determined by the Parliament and shall be within territory which shall have been granted to or acquired by the Commonwealth, and shall be vested in and belong to the Commonwealth, and shall be in the State of New South Wales, and be distant not less than one hundred miles from Sydney.

Such territory shall contain an area of not less than one hundred square miles, and such portion thereof as shall consist of Crown lands shall be granted to the Commonwealth without any payment therefor.

The Parliament shall sit at Melbourne until it meet at the seat of Government.

126. The Queen may authorize the Governor-General to appoint any person, or any persons jointly or severally, to be his deputy or deputies within any part of the Commonwealth, and in that capacity to exercise during the pleasure of the Governor-General such powers and functions of the Governor-General as he thinks fit to assign to such deputy or deputies, subject to any limitations expressed or directions given by the Queen; but the appointment of such deputy or deputies shall not affect the exercise by the Governor-General himself of any power or function.

\*[127. In reckoning the numbers of the people of the Commonwealth, or of a State or other part of the Commonwealth, aboriginal natives shall not be counted.]

## CHAPTER VIII.—ALTERATION OF THE CONSTITUTION.

128. This Constitution shall not be altered except in the following manner:—

The proposed law for the alteration thereof must be passed by an absolute majority of each House of the Parliament, and not less than two nor more than six months after its passage through both Houses the proposed law shall be submitted in each State to the electors qualified to vote for the election of members of the House of Representatives.

But if either House passes any such proposed law by an absolute majority, and the other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, and if after an interval of three months the first-mentioned House in the same or the next session again passes the proposed law by an absolute majority with or without any amendment which has been made or agreed to by the other House, and such other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, the Governor-General may submit the proposed law as last proposed by the first-mentioned House, and either with or without any amendments subsequently agreed to by both Houses, to the electors in each State qualified to vote for the election of the House of Representatives.

When a proposed law is submitted to the electors the vote shall be taken in such manner as the Parliament prescribes. But until the qualification of electors of members of the House of Representatives becomes uniform throughout the Commonwealth, only one-half the electors voting for and against the proposed law shall be counted in any State in which adult suffrage prevails.

And if in a majority of the States a majority of the electors voting approve the proposed law, and if a majority of all the electors voting also approve the proposed law, it shall be presented to the Governor-General for the Queen's assent.

No alteration diminishing the proportionate representation of any State in either House of the Parliament, or the minimum number of representatives of a State in the House of Representatives, or increasing, diminishing, or otherwise altering the limits of the State, or in any manner affecting the provisions of the Constitution in relation thereto, shall become law unless the majority of the electors voting in that State approve the proposed law.

## SCHEDULE.

## OATH.

I, *A.B.*, do swear that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law. So HELP ME GOD!

## AFFIRMATION.

I, *A.B.*, do solemnly and sincerely affirm and declare that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law.

(NOTE. *The name of the King or Queen of the United Kingdom of Great Britain and Ireland for the time being is to be substituted from time to time.*)

\* Under Section 3 of the *Constitution Alteration (Aboriginals) 1967* the section in square brackets was repealed.

### The Royal Proclamation

The preceding Act received the Royal assent on 9 July 1900. This made it lawful to declare that the people of Australia should be united in a Federal Commonwealth. This proclamation, made on 17 September 1900, constituted the Commonwealth as from 1 January 1901; it read as follows.

#### BY THE QUEEN. A PROCLAMATION.

(Signed) VICTORIA R.

WHEREAS by an Act of Parliament passed in the Sixty-third and Sixty-fourth Years of Our Reign, intituled "An Act to constitute the Commonwealth of *Australia*," it is enacted that it shall be lawful for the Queen, with the advice of the Privy Council, to declare by Proclamation, that, on and after a day therein appointed, not being later than One year after the passing of this Act, the people of *New South Wales*, *Victoria*, *South Australia*, *Queensland* and *Tasmania*, and also, if Her Majesty is satisfied that the people of *Western Australia* have agreed thereto, of *Western Australia*, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia.

And whereas We are satisfied that the people of *Western Australia* have agreed thereto accordingly.

We therefore, by and with the advice of Our Privy Council, have thought fit to issue this Our Royal Proclamation, and We do hereby declare that on and after the First day of *January* One thousand nine hundred and one, the people of *New South Wales*, *Victoria*, *South Australia*, *Queensland*, *Tasmania*, and *Western Australia* shall be united in a Federal Commonwealth under the name of the Commonwealth of *Australia*.

Given at Our Court at *Balmoral* this Seventeenth day of *September*, in the Year of Our Lord One thousand nine hundred, and in the Sixty-fourth Year of Our Reign.

GOD SAVE THE QUEEN.

### The External Territories of Australia

#### Norfolk Island

In 1856 Norfolk Island was created a distinct and separate settlement under the jurisdiction of New South Wales. Later, in 1896, it was made a dependency under the Governor of that colony, and finally by the passage of the *Norfolk Island Act* 1913 it was accepted as a Territory of the Commonwealth of Australia. The island is situated in latitude 29° 3' 3" S., longitude 167° 57' 5" E., and comprises an area approximately 14 square miles.

#### Papua

Under the administration of the Commonwealth, but not included in it, is British New Guinea or Papua, finally annexed by the British Government in 1884. This Territory was for a number of years administered by the Queensland Government, but was transferred to the Commonwealth by proclamation on 1 September 1906, under the authority of the *Papua Act* 1905. The area of Papua is about 86,100 square miles.

#### Trust Territory of New Guinea

In 1919 it was agreed by the Principal Allied and Associated Powers that a mandate should be conferred on Australia for the government of the former German territories and islands situated in latitude between the Equator and 8° S., and in longitude between 141° E. and 159° 25' E. The mandate was issued by the League of Nations on 17 December 1920. The Governor-General of the Commonwealth was authorised to accept the mandate by the *New Guinea Act* 1920, which also declared the area to be a Territory under the authority of the Commonwealth by the name of the Territory of New Guinea. The land area comprises about 92,160 square miles, and the administration under the mandate dated from 9 May 1921. New Guinea is now administered under a Trusteeship Agreement with the United Nations, approved on 13 December 1946.

#### Australian Antarctic Territory

In Imperial Order in Council of 7 February 1933 placed under Australian authority 'all the islands and territories other than Adelie Land which are situated south of the 60th degree of South Latitude and lying between the 160th degree of East Longitude and the 45th degree of East Longitude'.

The Order came into force with a proclamation issued by the Governor-General on 24 August 1936, after the passing of the *Australian Antarctic Territory Acceptance Act* 1933 by the Commonwealth Parliament. The boundaries of Adelie Land were definitely fixed by a French Decree of 1 April 1938 as latitude 60° S., longitude 136° E., and longitude 142° E.

#### Heard and McDonald Islands

Heard and McDonald Islands, about 2,500 miles south-west of Fremantle, were transferred from United Kingdom to Australian control as from 26 December 1947. Heard Island is approximately 27 miles long and 13 miles wide, and McDonald Islands, about 26 miles to the west of Heard Island, are small, rocky and precipitous.

#### Cocos [Keeling] Islands

*The Cocos (Keeling) Islands Act* 1955 provided for the acceptance of the Cocos Islands, in the Indian Ocean, as a Territory under the authority of the Commonwealth of Australia and was parallel to an Act of the United Kingdom Parliament transferring authority over the islands to the Commonwealth. Consequent on the passing of these Acts, Her Majesty, by Order in Council, specified 23 November 1955 as the date of transfer. From that date the islands came under Australian administration and an Official Representative of Australia was appointed to take charge of the local administration of the islands. Their area is about 5½ square miles, and they are situated in the Indian Ocean in latitude 12° 5' S. and longitude 96° 53' E.

#### Christmas Island

The *Christmas Island Act* 1958 provided for the acceptance of Christmas Island, in the Indian Ocean, as a Territory under the authority of the Commonwealth of Australia. Complementary legislation having been passed by the Parliament of the United Kingdom, the island was transferred to the Australian administration on 1 October 1958, and an Official Representative was appointed to administer the Territory. The area of the island is about 52 square miles and it is situated in the Indian Ocean in latitude 10° 25' 22" S. and longitude 105° 39' 59" E.

#### Coral Sea Islands

The Coral Sea Islands were declared to be a Territory of the Commonwealth by the *Coral Sea Islands Act* 1969. The scattered reefs and islands, often little more than sandbanks, spread over a sea area of 400,000 square miles with only a few square miles of actual land area, between the Great Barrier Reef and longitude 157° 10' E.





## CHAPTER 2

### PHYSICAL GEOGRAPHY AND CLIMATE

#### General description of Australia

##### Geographical position

The Australian Commonwealth, which includes the island continent of Australia and the island of Tasmania, is situated in the Southern Hemisphere, and comprises an area of 2,967,909 square miles, the mainland alone containing 2,941,526 square miles. Bounded on the west and east by the Indian and Pacific Oceans respectively, it lies between longitudes 113° 9' E. and 153° 39' E., while its northern and southern limits are the parallels of latitude 10° 41' S. and 43° 39' S., or, excluding Tasmania, 39° 8' S. On its north are the Timor and Arafura Seas and Torres Strait, on its south the Southern Ocean\*. The extreme points are Steep Point on the West, Cape Byron on the east, Cape York on the north, and South-East Cape or, if Tasmania be excluded, Wilson's Promontory, on the south. The difference in latitude between Cape York and Wilson's Promontory is 1,959 miles, and in longitude between Steep Point and Cape Byron 2,489 miles.

##### Tropical and temperate regions

Of the total area of Australia, nearly 39 per cent lies within the tropics. Taking the latitude of the Tropic of Capricorn as 23° 30' S., the areas within the tropical and temperate zones are approximately as follows.

**AREAS OF TROPICAL AND TEMPERATE REGIONS: STATES AND TERRITORIES**  
(Square miles)

<i>Area</i>	<i>N.S.W. (a)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Total</i>
Within tropical zone .	..	..	360,642	..	364,000	..	422,980	1,147,622
„ temperate zone	310,372	87,884	306,358	380,070	611,920	26,383	97,300	1,820,287
<b>Total area</b>	<b>310,372</b>	<b>87,884</b>	<b>667,000</b>	<b>380,070</b>	<b>975,920</b>	<b>26,383</b>	<b>520,280</b>	<b>2,967,909</b>

(a) Includes Australian Capital Territory (939 square miles).

Fifty-four per cent of Queensland lies within the tropical zone and 46 per cent in the temperate zone; 37 per cent of Western Australia is tropical and 63 per cent temperate; while 81 per cent of the Northern Territory is tropical and 19 per cent temperate. All the remaining States lie within the temperate zone.

##### Area of Australia compared with areas of other countries

The area of Australia is almost as great as that of the United States of America excluding Alaska, four-fifths of that of Canada, more than half as large again as Europe excluding the U.S.S.R., and about twenty-five times that of Great Britain and Ireland. The areas of Australia and of certain other countries are shown in the table on the following page. The areas shown are in the main obtained from the *Statistical Yearbook* 1969, published by the Statistical Office of the United Nations, and the countries have been arranged in accordance with the continental groups used therein.

\* The Southern Ocean is a local designation for the part of the Indian Ocean lying between the southern shores of Australia and Antarctica.

(c) Australian Trust Territory, Western New Guinea



## AREAS OF STATES AND TERRITORIES, AND STANDARD TIMES

State or Territory	Area	Percentage of total area	Standard times	
			Meridian selected	Ahead of G.M.T.(a)
	sq miles			hours
New South Wales . . .	309,433	10.43	150° E.	10
Victoria . . . . .	87,884	2.96	150° E.	10
Queensland . . . . .	667,000	22.47	150° E.	10
South Australia . . . .	380,070	12.81	142° 30' E.	9½
Western Australia . . .	975,920	32.88	120° E.	8
Northern Territory . . .	520,280	17.53	142° 30' E.	9½
Australian Capital Territory .	939	0.03	150° E.	10
<i>Mainland</i> . . . . .	<i>2,941,526</i>	<i>99.11</i>	..	..
Tasmania . . . . .	26,383	0.89	150° E.	10
<b>Australia</b> . . . . .	<b>2,967,909</b>	<b>100.00</b>	..	..

(a) Greenwich Mean Time is one hour behind British Standard Time.

The coastline of Australia is approximately 12,000 miles long—New South Wales, 700 miles; Victoria, 700 miles; Queensland, 3,200 miles; South Australia, 1,500 miles; Western Australia, 4,000 miles; Northern Territory, 1,000 miles; Australian Capital Territory, Jervis Bay area included in New South Wales; Tasmania 900 miles. These measurements are broadly on a 'direct' basis, but even so they must be regarded as approximate only.

### Geographical features of Australia

The following description is a broad summary of the main physical characteristics of the Australian continent.

A section through the Australian continent from east to west, at the point of its greatest breadth, shows first a narrow belt of coastal plain. This plain, extending north and south along the whole east coast, is well watered by rivers. It is of variable width, seldom more than sixty or seventy miles, and occasionally only a few miles, the average being roughly about forty to fifty miles. Bordering this plain is the Great Dividing Range, which extends from the North of Queensland to the south of New South Wales, and thence one branch sweeps westward towards the boundary of Victoria and South Australia, and the other, the main branch, terminates in Tasmania. This range, which rises, often abruptly, from the plain, frequently presents bold escarpments on its eastern face, but the descent on its western slopes is gradual, until, in the country to the north of Spencers Gulf, the plain is not above sea-level and occasionally even below it. Thence there is another almost imperceptible rise until the mountain ranges of Western Australia are reached, and beyond these lies another coastal plain. The mountains of Australia are relatively low, the highest peak, Mount Kosciusko, in New South Wales, being only about 7,300 feet. Three-quarters of the land-mass of Australia lies between the 600 and 1,500 feet contours in the form of a huge plateau, constituting the most distinctive feature of the Australian continent, to which the peculiarities of Australia's climate can probably be largely ascribed.

The rivers of Australia may be divided into two major classes, those of the coastal plains with moderate rates of fall and those of the central plains with very slight fall. Of the former not many are navigable for any distance from their mouths, and bars make many of them difficult of access or inaccessible from the sea.

The longest two rivers of the northern part of the east coast are the Burdekin and the Fitzroy in Queensland. The Hunter is the largest coastal river of New South Wales, and the Murray River, with its great tributary the Darling, drains part of Queensland, the major part of New South Wales, and a large part of Victoria, finally flowing into the arm of the sea known as Lake Alexandrina, on the eastern side of the South Australian coast. The total length of the Murray is about 1,600 miles, 400 being in South Australia and 1,200 constituting the boundary between New South Wales and Victoria. The total length of the Murray-Darling from the source of the Darling to the mouth of the Murray is about 2,300 miles. The rivers of the north-west coast of Australia (Western Australia), e.g. the Murchison, Gascoyne, Ashburton, Fortesque, De Grey, Fitzroy, Drysdale, and Ord are of considerable size. So also are those in the Northern Territory, e.g. the Victoria and Daly, and those

on the Queensland side of the Gulf of Carpentaria, such as the Gregory, Leichhardt, Cloncurry, Gilbert, and Mitchell. The rivers of Tasmania have short and rapid courses, as might be expected from the configuration of the country.

The 'lakes' of Australia may be divided into three classes: true permanent lakes; lakes which, being very shallow, become mere morasses in dry seasons or even dry up, and finally present a cracked surface of salt and dry mud; and lakes which are really inlets of the ocean, opening out into a lake-like expanse. The second class is the only one which seems to demand special mention. These are a characteristic of the great central plain of Australia. Some of them, such as Lakes Torrens, Gairdner, Eyre, and Frome, are of considerable extent.

For further information on the geographical features of Australia earlier issues of the Year Book should be consulted. The list of special articles, etc., at the end of this volume indicates the nature of the information available and its position in the various issues.

## Weather and climate of Australia

This section has been prepared by the Director of the Commonwealth Bureau of Meteorology, and the various States and Territories have been arranged in the standard order adopted by that Bureau. The section concludes with a brief summary of the weather of 1971.

### Introduction

Australia extends from about latitude 10° S. to latitude 44° S., but owing largely to the moderating effects of the surrounding oceans and the absence of very pronounced and extensive mountain masses it is less subject to extremes of climate than are regions of similar size in other parts of the world. The average elevation of the land surface is low—probably close to 900 feet above the sea; while the maximum altitude is just above 7,300 feet. Latitude for latitude the Australian climate is generally more temperate than that of the other large land masses of the earth, although it varies considerably from the tropical to the alpine.

The Australian meteorological seasons are: Summer—December, January, February; Autumn—March, April May; Winter—June, July August; Spring—September, October, November.

The following general discussion of the climate of Australia is necessarily brief. However, extensive records of Australian climatic data are held and published in various forms by the Bureau of Meteorology. A programme of regional climatic survey has been in progress for some years, and a large number of studies have been published by the Bureau of Meteorology, by the Department of National Development, and by State Development Authorities. The Bureau of Meteorology welcomes inquiries for climatic information, which may be made at its Central Office in Melbourne or through the Regional Offices which are situated in each of the State capital cities and in Canberra and Darwin. Reference may also be made to various bulletins and research papers mentioned in this text for more detailed information on particular topics.

### Precipitation

Precipitation of moisture from the atmosphere may take various forms depending chiefly on the thermal conditions existing at the time. Within the Australian region precipitation occurs chiefly as rain because of the generally mild temperatures, but may also occur as snow or hail. Broadly, the immediate physical cause of rainfall may be said to be the lifting of moist air with resultant cooling, condensation into cloud, and eventual precipitation of the heavy water droplets as rain. This process may be achieved by three different means each of which may be combined with either or both of the others:

- (a) Orographic lifting caused by winds blowing onto rising terrain;
- (b) Convective lifting resulting in the development of individual rain clouds of the cumulus or cumulonimbus type producing showers and thunderstorms;
- (c) lifting of a warm air mass as it rises over cooler air—known as a 'frontal' process.

*Annual rainfall.* The distributions of the average annual and median annual rainfall over Australia are shown in plates 2 and 3, pages 30–1, while plate 4, page 32, shows the distribution in 1971. The median is the value equalled or exceeded by half of the occurrences, and usually gives a better indication of the rainfall most frequently occurring.

While Australia is a continent of comparatively low relief, the orographic processes in rain production are very marked in the chain of the Great Dividing Range bordering the whole east coast of the continent, in the ranges of the south-western corner of Western Australia, and in Tasmania. Thus on the east coast the higher rainfall areas lie between the ranges and the Pacific Ocean in the region of prevailing south-east wind circulation. In Tasmania and the south-west of Western Australia the region of high rainfall lies between the ranges and the ocean to the west, these areas lying in a region of predominantly westerly wind flow.

The north-western part of the continent and to some extent the whole region of the Northern Territory and inland north Queensland comes under the influence of the Australian-Asian monsoon. This results in high rainfalls in a summer wet season with the inflow of moist air from the north-west, and a winter dry season with predominantly south-east winds blowing across the dry regions of the interior and producing little rainfall. Tropical cyclones affect the waters adjacent to the north-east and north-west of Australia between December and April. Their frequency varies greatly from season to season, but on the average about three of these disturbances occur in the Coral Sea each season and about two in the eastern Indian Ocean adjacent to the west coast of the continent. When tropical cyclones move close to the tropical coast of the continent they cause very heavy rainfalls over the coastal regions. On occasions these cyclones move over the land and lose intensity, but many still continue to be accompanied by heavy rainfall along their path.

Southern Australia lies in the region of the mid-latitude westerlies for the winter half of the year and is subject to the rain-producing influences of the great depressions of the Southern Ocean and their associated frontal systems. The combined effects of these systems and the topography lead to high winter rainfalls in south-western and south-eastern Australia and in Tasmania, with the highest falls occurring on the windward side of the mountains. The rainfall generally decreases inland with distance from the coast, although the 10-inch isohyet reaches the shore of the Great Australian Bight and the central western coast of Western Australia in regions which are of very flat relief and which, because of their position and the orientation of the coastline, are only rarely exposed to moist winds.

**AREA DISTRIBUTION OF AVERAGE ANNUAL RAINFALL: STATES AND TERRITORIES**  
(Per cent)

<i>Average annual rainfall</i>	<i>W.A.</i>	<i>N.T.</i>	<i>S.A.</i>	<i>Qld</i>	<i>N.S.W.</i> (a)	<i>Vic.</i>	<i>Tas.</i>	<i>Total</i>
Under 10 inches . . .	58.0	24.7	82.8	13.0	19.7	Nil	Nil	39.0
10 and under 15 inches . . .	22.4	32.4	9.4	14.4	23.5	22.4	Nil	20.6
15 " " 20 " " . . .	6.8	9.7	4.5	19.7	17.5	15.2	0.7	11.2
20 " " 25 " " . . .	3.7	6.6	2.2	18.8	14.2	17.9	11.0	9.0
25 " " 30 " " . . .	3.7	9.3	0.8	11.6	9.1	18.0	11.4	7.2
30 " " 40 " " . . .	3.3	4.7	0.3	11.1	9.9	16.1	20.4	6.1
40 inches and over . . .	2.1	12.6	Nil	11.4	6.1	10.4	56.5	6.9
<b>Total . . . . .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Includes Australian Capital Territory.

The region with the highest annual rainfall is the east coast of Queensland between Port Douglas and Cardwell, where Tully has an annual average of 177 inches. A further very high rainfall region is the mountainous west coast of Tasmania, where Lake Margaret has the highest annual average of 145 inches. The area of lowest average annual rainfalls is that of some 180,000 square miles surrounding Lake Eyre in South Australia, where on the average only 4 to 6 inches are received annually. The lowest average over a long period of record is at Troudaninna—4.13 inches. Rain occurs very irregularly, averaging only about one or two days a month in this region.

Of all the continents (excluding Antarctica), Australia receives the least depth of rainfall and has the least run-off from its rivers into the oceans. Only in relatively small areas of the continent could the rainfall be described as abundant.

*Seasonal distribution of rainfall.* The average monthly distribution of rainfall in the various Australian rainfall districts is shown by the histograms of plate 5, page 33.

The following are the most marked features.

- (a) The clearly defined wet summer and dry winter of the monsoon region of northern Australia.
- (b) The more regular distribution of rainfall throughout the year in south-eastern Australia. In the region to the south and west of the Great Dividing Range a less pronounced maximum of rainfall is noticeable in the winter or early spring. On the Gippsland (eastern Victoria) coast the rainfall is fairly evenly distributed throughout the year, but further along the east coast of the continent the rainfall minimum in late winter and early spring begins to appear and becomes more marked as the tropical regions are approached.
- (c) The marked rainfall maximum in the south-western districts of Western Australia in winter—the period of the most active southern depressions and frontal systems in this region.





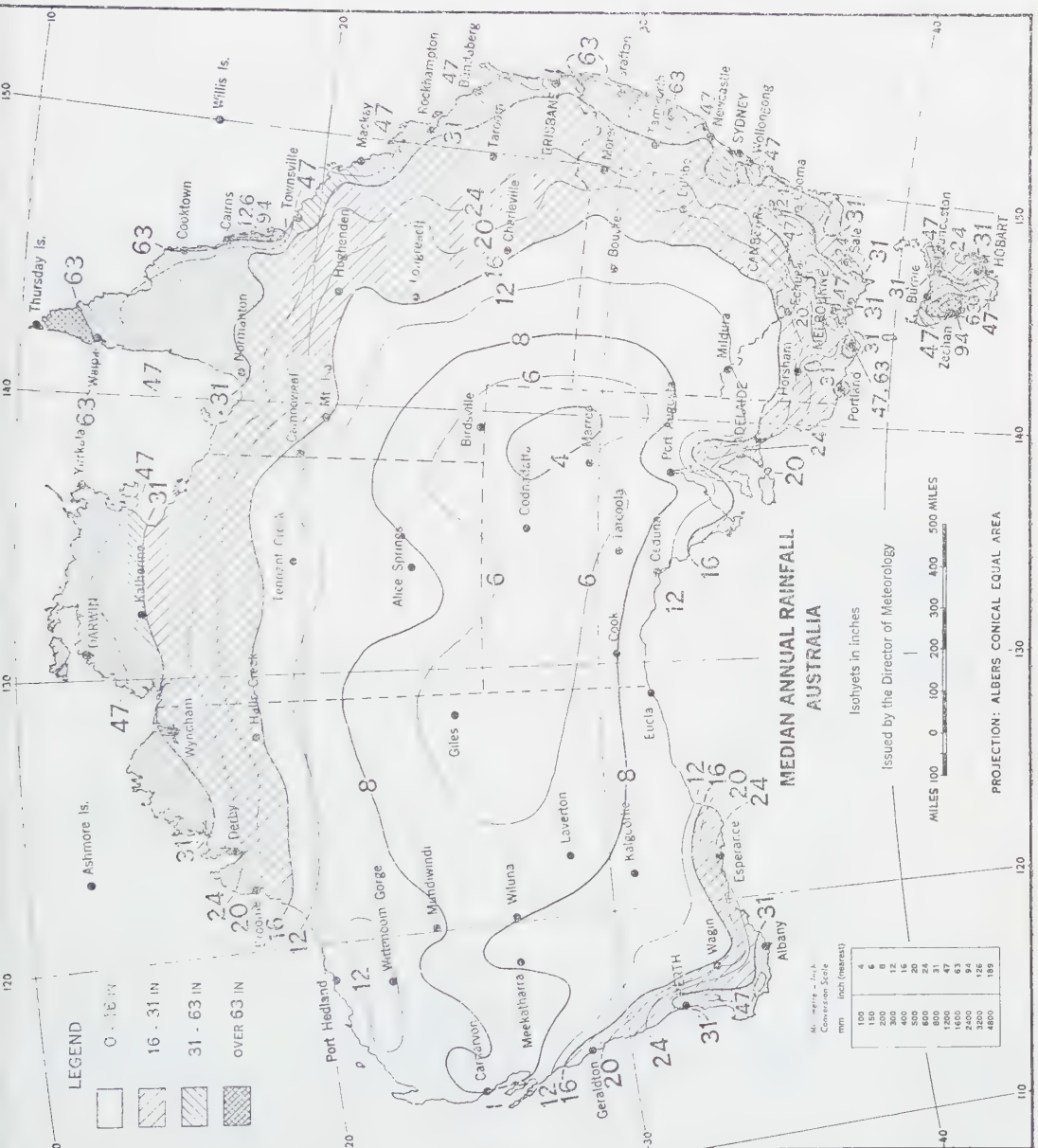


PLATE 3







For further information on monthly rainfalls reference may be made to the various Australian rainfall bulletins, to the Climatological Surveys of particular districts, and to the annual rain maps and books of normals (standard 30 year periods), all published by the Bureau of Meteorology.

*Variability of rainfall.* For most agricultural pursuits a more important criterion of the value of rainfall is its variability or reliability. The adequate description of rainfall variability over an extensive geographical area is a matter of some difficulty. Probably the best available measures are to be found in the tables which have been calculated for a number of individual stations in some of the Climatological Survey districts. These tables show the percentage chances of receiving specified amounts of rainfall in monthly seasonal or annual time spans. Statistical indexes of rainfall variation based on a number of different techniques have been used to produce maps which show the main features of the variability of annual rainfall over Australia.

In general it may be stated that the regions of most reliable rainfall are the south-west of Western Australia, western Tasmania, and western and southern Victoria south of the divide. These areas have one of the most reliable rainfalls in the world. Elsewhere in Australia the degree of variability, in general, increases inland, but the region of the highest variability for low average annual rainfalls extends across the central part of the continent from south-western Queensland to the central coast of Western Australia. Some outstanding examples of the numerous instances of high rainfall variability throughout Australia are given below.

At Onslow (Western Australia) annual totals vary from 0.05 inches to 28 inches, and in the four consecutive years 1921 to 1924 the annual totals were 22.25, 2.71, 26.82, and 2.18 inches respectively. At Whim Creek, where 29.41 inches have been recorded in a single day, only 17 points (0.17 inches) were received in the whole of 1924. Great variability can also occur in the heavy rainfall areas, e.g. at Tully the annual rainfalls have varied from 310.92 inches in 1950 to 104.98 inches in 1943.

The following table of annual rainfall for the Australian capital cities for the past thirty years indicates the variation in rainfall at these sites.

RAINFALL: AUSTRALIAN CAPITAL CITIES, 1941 TO 1970

Year	Perth		Adelaide		Brisbane		Sydney		Canberra(a)		Melbourne		Hohart(b)	
	Amount	No. of days	Amount	No. of days	Amount	No. of days	Amount	No. of days	Amount	No. of days	Amount	No. of days	Amount	No. of days
1941 . . . . .	34.74	122	22.56	126	31.50	105	26.74	129	21.33	93	31.78	157	23.49	145
1942 . . . . .	39.24	140	25.44	133	44.01	125	48.29	121	25.18	108	29.79	148	19.42	163
1943 . . . . .	31.46	117	17.84	135	50.68	126	50.74	136	22.82	141	18.80	150	20.84	149
1944 . . . . .	27.39	123	17.13	114	27.85	100	31.04	115	11.96	82	21.32	143	26.23	151
1945 . . . . .	52.67	137	17.85	105	48.16	130	46.47	136	23.76	92	19.22	152	16.92	157
1946 . . . . .	41.47	122	22.59	135	38.66	83	36.05	111	20.53	102	29.80	177	39.45	193
1947 . . . . .	43.42	137	21.89	146	60.30	146	41.45	137	26.30	121	30.47	163	38.61	181
1948 . . . . .	34.75	126	21.40	122	41.54	106	38.83	131	31.49	104	20.98	155	23.42	178
1949 . . . . .	27.15	126	18.23	119	47.18	121	66.26	149	25.42	115	31.41	163	22.85	157
1950 . . . . .	32.27	122	16.06	91	63.93	152	86.63	183	41.79	124	26.18	147	19.25	131
1951 . . . . .	34.14	127	25.44	135	33.89	87	53.15	143	18.97	95	29.85	155	24.57	163
1952 . . . . .	39.28	123	19.99	128	33.49	122	59.19	130	37.98	143	34.39	177	30.35	165
1953 . . . . .	37.14	119	20.00	121	43.60	101	40.86	110	19.42	110	28.38	148	28.06	162
1954 . . . . .	28.05	112	16.73	109	61.36	142	41.29	134	18.00	80	33.53	139	27.20	143
1955 . . . . .	46.52	138	24.58	134	50.41	136	72.46	160	28.92	128	30.70	160	22.32	168
1956 . . . . .	37.35	107	27.24	154	59.18	120	67.33	155	34.90	159	30.96	188	36.63	175
1957 . . . . .	33.40	117	16.71	110	20.58	80	27.13	110	13.39	78	20.68	146	28.66	129
1958 . . . . .	32.08	107	17.57	121	46.61	115	59.19	144	23.51	106	26.98	155	36.55	166
1959 . . . . .	24.23	114	11.32	88	45.84	146	59.67	164	35.07	106	25.84	131	19.28	136
1960 . . . . .	28.21	112	23.07	129	27.51	103	51.01	152	31.98	128	33.50	162	29.35	140
1961 . . . . .	32.27	133	14.91	122	42.36	134	57.08	161	30.42	109	22.05	129	18.03	156
1962 . . . . .	28.75	123	17.96	125	41.39	131	44.90	137	25.71	122	23.06	140	25.40	161
1963 . . . . .	39.14	140	24.43	118	49.09	134	80.11	169	24.32	126	29.04	149	15.51	129
1964 . . . . .	38.40	127	21.89	135	48.18	112	43.30	99	25.29	106	27.80	166	28.06	169
1965 . . . . .	40.98	128	13.34	111	41.02	113	36.01	118	15.72	87	23.24	122	20.98	158
1966 . . . . .	30.45	116	19.49	123	43.80	111	48.40	130	27.22	117	26.81	156	27.52	145
1967 . . . . .	41.26	104	10.11	89	70.80	137	52.78	141	13.84	72	13.06	106	19.23	130
1968 . . . . .	36.63	136	25.72	141	33.50	93	24.56	113	20.26	103	20.96	141	18.64	152
1969 . . . . .	22.59	87	20.68	112	41.15	115	56.94	140	29.83	121	24.60	137	28.35	156
1970 . . . . .	35.76	127	19.01	149	56.68	118	43.42	127	28.40	121	31.63	153	30.78	157
Average . . . . .	34.78	121	20.80	121	44.87	123	47.61	147	24.81	109	25.83	143	24.84	163
No. of years . . . . .	95	95	132	132	111	111	112	112	32	32	115	115	88	88
Standard 30 years' normal(c) . . . . .	35.02	119	20.60	126	43.00	115	47.48	141	(d)25.76	(d)106	27.21	155	26.27	163

(a) Fairbairn Aerodrome; records in issues of the Year Book prior to No. 36 were for the station at Acton which closed down in 1939, while from Year Book No. 36 to Year Book No. 53 records were for the Commonwealth Forestry Bureau station. (b) Records taken from present site commenced in 1883. (c) 1931-1960. (d) Commonwealth Forestry Bureau.

Prolonged dry spells are fairly common in much of Australia, particularly in inland areas. A discussion of droughts in Australia may be found in Gibbs W. J. and Maher J. V. *Rainfall Deciles as Drought Indicators*, Bureau of Meteorology Bulletin No. 48 (1967). A shorter account of droughts in Australia will be found in a special article in Year Book No. 45, pages 51–6. A more recent account is included with Chapter 22—Water Conservation and Irrigation in Year Book No. 54 of 1968.

*Rainfall and vegetation.* In general, the three main climatic zones of the continent exert a particular controlling influence on the general vegetation. These are the northern third of the continent where rainfall is almost always restricted to the warmer months of the year, the southern third where rainfall is predominantly a winter and spring event, and a transitional zone which experiences rainfall from both sources, although in greatly reduced quantity over the interior, which is subject to frequent drought.

The length of the growing season, or conversely the extent of dry periods during the year, decides the type of vegetation which establishes in a region. The climatic influence on vegetative response is primarily through soil moisture and temperature. Thus in colder south-eastern areas the growing season is mainly temperature dependent, but elsewhere the availability of soil moisture is the prime factor. All rainfall is not equally effective in increasing the soil moisture, its availability from the soil storage to plants depending on the extent of surface run-off, seepage beyond the root zone, and loss by surface evaporation. Furthermore the effectiveness of available soil moisture depends on the evaporative demand of the local climate; for example, an inch of stored moisture may maintain vigorous plant growth for twice as long in Tasmania as in the warmer, drier atmosphere of inland New South Wales. Thus it is not a sound practice to assess the agricultural potential of different areas simply by reference to average rainfall.

Generally speaking, the length of the growing season exceeds nine months over the far south-west of Western Australia and in all eastern coastal districts from Cape York Peninsula to western Victoria, and within this region humid and semi-humid plant formation thrive. Soil types, of course, also play a part in the distribution of vegetation, but they too are, to a considerable extent, the result of climate and weather.

The climate of Arnhem Land (Northern Territory) is such that there is a considerable surplus of moisture for about five months of the warm season, followed regularly by a virtual drought which frequently reaches severe intensity, and this special combination of meteorological conditions results in annual and perennial vegetation adapted to this cycle.

Over the interior the position is more complex because of the lower levels of the rainfall, its greater variability, and the high evaporative power of the drier, warmer atmosphere. In this vast section of the continent the climatic demands are so severe that the vegetative formations of the moisture zones (i.e. the mesophytes, requiring about five months or longer growing season) are unable to exist. Thus a plant species adapted to these very dry and variable conditions (xerophytes), e.g. spinifex, salt bush, blue bush, and stunted eucalypts, capable of maintaining a cattle population, predominates over the arid interior.

The arid and semi-arid lands of Western Australia and inland New South Wales which border the desert carry the majority of the sheep in these States. In New South Wales the most important vegetative formations in these areas are savannah (treeless plains), savannah woodland, mulga scrub, and mallee scrub. In Western Australia sclerophyllous grass steppe and mulga scrub border the deserts and are succeeded to the south by zones of mallee scrub and mallee heath.

*Rainfall intensity.* The study of extremely high rainfall intensities is important in the investigation of the flow characteristics of river systems, and flood prevention measures, the design of irrigation works, and hydro-electric schemes. The highest rainfalls recorded in a period of twenty-four hours up to 1968 for each State and Territory were: Western Australia, Whim Creek, 29.41 inches, 3 April 1898; Northern Territory, Roper Valley, 21.44 inches, 15 April 1963; South Australia, Ardrossan, 8.10 inches, 18 February 1946; Queensland, Crohamhurst, 35.71 inches, 3 February 1893; New South Wales, Dorrigo, 25.04 inches, 24 June 1950; Australian Capital Territory, Jervis Bay, 7.15 inches, 28 April 1963; Victoria, Balook, 10.81 inches, 18 February 1951; and Tasmania Mathinna, 13.25 inches, 5 April 1929. Most of the very high intensities have occurred in the coastal strip of Queensland, where the combination of a tropical cyclone moving close to the mountainous terrain provides ideal conditions for spectacular falls. For other very heavy falls at various localities reference may be made to Year Books No. 14, pages 60–4, No. 22, pages 46–8, No. 29, pages 43, 44 and 51, and No. 53, pages 32–4.

*Snow and hail.* For varying periods from late autumn to early spring snow usually covers the ground to a great extent on the Australian Alps above a level of about 4,500 to 5,000 feet, where in both New South Wales and Victoria ski-ing resorts operate throughout the season.



In Tasmania also the highlands are frequently covered above the 3,500 feet level for extended periods of the winter. There are, however, some years when snowfalls are much lighter than normal and even fail completely. Light snow has been known to fall occasionally as far north as the New England plateau in New South Wales (latitude  $31^{\circ}$  S.), and in exceptional seasons much of the dividing range from Victoria to Toowoomba (Queensland) has been covered above a level of about 4,000 feet. In ravines around Mount Kosciusko small areas of snow may persist throughout the summer after a heavy winter fall. This winter snowfall of south-eastern Australia is important in aiding the reliable flow of many streams which are utilised in the hydro-electric schemes of the Snowy Mountains, northern Victoria, and Tasmania. Snowfall at low terrain elevations occurs from time to time, particularly in Tasmania and Victoria, but falls are usually light and rarely lie more than a few days.

Hail is most frequent in winter and spring along the south-eastern coastal region of the continent and in Tasmania, where it is usually of a relatively small size. Summer storms, however, which are quite frequent, particularly in the highland plateau regions of eastern Australia, often produce stones of large size and of destructive intensity. Very large stones capable of piercing light gauge galvanised iron are reported from time to time, and damage to fruit crops in south-eastern Australia from large hail stones is quite frequent.

**Floods.** In general, flooding in Australia is most pronounced on the shorter streams flowing from the Great Dividing Range into the Pacific Ocean along the seaboard of Queensland and New South Wales. These floods are particularly destructive on the more densely populated coast of New South Wales. The chief rivers in this area are the Tweed, Richmond, Clarence, McLeay, Nepean, Hawkesbury, Hunter, and Shoalhaven, all of which experience quite frequent and considerable flooding. These floods occur chiefly in summer but may occur at any time of the year.

The great Fitzroy and Burdekin river systems in Queensland are also subject to floods during the summer wet season, while much of the heavy monsoon rain in northern Queensland flows southward through the normally dry channels of the network of rivers draining into Lake Eyre. This water may cause extensive floods over a vast area, but it is soon lost by seepage and evaporation and rarely reaches the lake in any quantity. The Condamine and other tributaries of the Darling also carry considerable volumes of water south through western New South Wales to the Murray, and flooding along their courses occurs from time to time.

Flooding also occurs from time to time, usually in autumn, winter, and spring, in the Murray-Murrumbidgee system of New South Wales and Victoria and on the smaller coastal streams of southern Victoria. In Tasmania, flooding of the north coast streams, particularly the South Esk system, is common in the same seasons. In South Australia some flooding has occurred in the lower reaches of the Murray owing to rainfall as far away as Queensland and south-eastern New South Wales. In the north of Western Australia and the Northern Territory, flooding of the coastal streams occurs frequently in summer but is not of such economic importance as the flooding of the eastern coastal streams of the continent, where many localities are more vulnerable to damage.

### Temperature

Conditions vary greatly for a particular individual even in a fixed location, so that it is difficult to describe general comfort variability uniquely throughout a region as varied climatically as Australia. A number of indexes which attempt to incorporate some of the factors concerned\* have been used experimentally from time to time, and further research continues on this very difficult problem. Generally speaking, there is an increase in discomfort northwards within the tropical regions of Australia in summer, owing to the heat and high absolute humidity which reached a maximum in the extreme north of the continent. Such conditions are, however, ameliorated to a large extent in highland areas such as the Atherton Tableland in Queensland. No part of Australia is uncomfortably hot in winter, and only in a small area of the Australian Alps and highland Tasmania does bodily strain due to cold exist in winter. The history of the settlement of the northern regions of Queensland and the Northern Territory indicates that with accelerating development of studies and experience in the arrangement of living and working accommodation, clothing, and general way of life, the effects of extremes of climate can be minimised.

For some further discussion of the problems of temperature and comfort conditions reference may be made to Ashton, H. T., *Meteorological Data for Air Conditioning in Australia*, Bureau of Meteorology Bulletin No. 47 (1964).

**Average seasonal temperature distribution.** Plates 6 to 9, pages 38–9, show the normal daily maximum and minimum temperatures for January and July, which may be taken as indicative respectively of the summer and winter seasons in Australia. Further detailed temperature data are presented on pages 49–58 for the capital cities and more important country towns of the Commonwealth.

\* See Year Book No. 53, page 35.

On the basis of average annual mean temperatures, and latitude for latitude, Australia is somewhat cooler than the other land masses of the southern hemisphere and considerably cooler than the same latitudes in the large continental areas of the northern hemisphere. This is due to the insular nature of Australia and the stronger general circulation of the atmosphere in the southern hemisphere resulting in the transport of higher latitude (cooler) air into the subtropical regions.

July is the month with the lowest mean temperature in all parts of the continent, while the month with the highest mean temperature varies from February in Tasmania and southern Victoria to December in the northern part of the continent and November in Darwin. The lateness of the month of highest average temperature in the extreme south of the continent is due in part to the effect of the Southern Ocean, where the sea surface temperature reaches its maximum in February. The cooler period of the late summer in the north is due largely to increased cloudiness associated with the inflow of north-west winds with the onset of the monsoon season.

In January average maximum temperatures exceed 95° F. over a vast area of the interior of the continent, and over large areas exceed 100° F. The hottest part of Australia is situated in the north of Western Australia around the Marble Bar and Nullagine area, where the daily maximum screen temperature during the summer frequently exceeds 100° F. for weeks at a time.

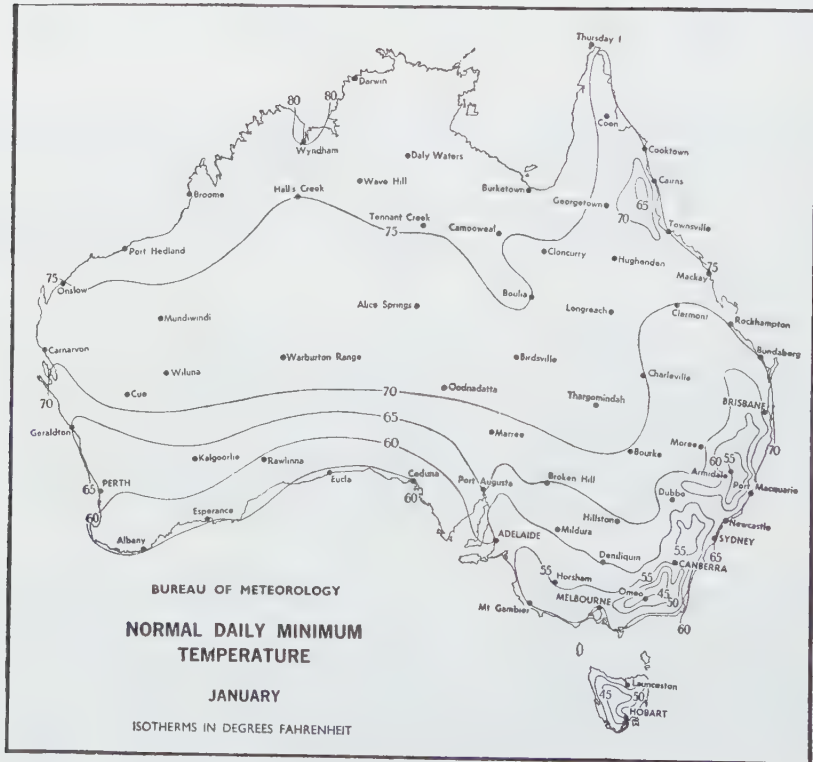
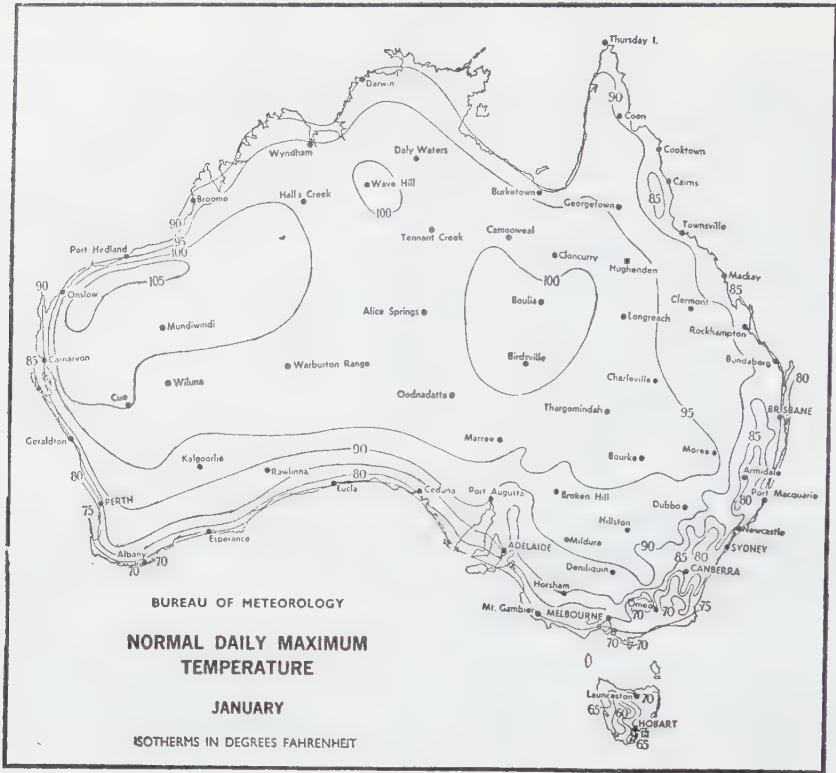
The marked change of maximum temperature in summer with distance from the sea, in areas close to the coasts, particularly along the Great Australian Bight and the Indian Ocean coast of Western Australia, is due to the penetration inland of the vigorous sea breezes which are initiated by the considerable temperature contrast between land and sea surface temperatures. The 75° F. isotherm of January mean maximum temperature skirts the southern coast of the continent from south-western Western Australia to Gippsland.

In January the mean minimum temperatures in the tropics, except for some highland regions, exceed 72° F., with a gradual decrease southward to values of 55° F. in Victoria and 50° F. in Tasmania. Highland regions in the south have mean values of 45° F. and lower. In July a more regular latitudinal distribution of mean maximum temperature is evident, only the extreme north of the continent having mean maxima higher than 80° F. Values lower than 60° F. are general over the south-eastern part of the continent, with mean maxima falling below 40° F. in small alpine areas. Average night minimum temperatures in July fall below 45° F. in areas south of the tropics and away from the coast. Alpine regions again record the lowest temperatures with some areas experiencing means lower than 25° F.

*Extreme variation and daily range.* Only at a few inland places in Australia does the absolute range of temperature (i.e. the range from the highest maximum to the lowest minimum) exceed 100° F. Generally it is in the range 70° F. to 90° F. in the inland areas and somewhat less on the coasts. The highest temperature recorded in Australia was 127.5° F. at Cloncurry (Queensland) on 16 January 1889 and the lowest -8° F. at Charlotte Pass in the southern Alps on 14 July 1945 and again on 22 August 1947. The world record maximum temperature is 136° F. at Azizia (Tripoli) on 13 August 1922 and the world record minimum temperature -126.9° F. at Vostok on the Antarctic plateau on 24 August 1960.

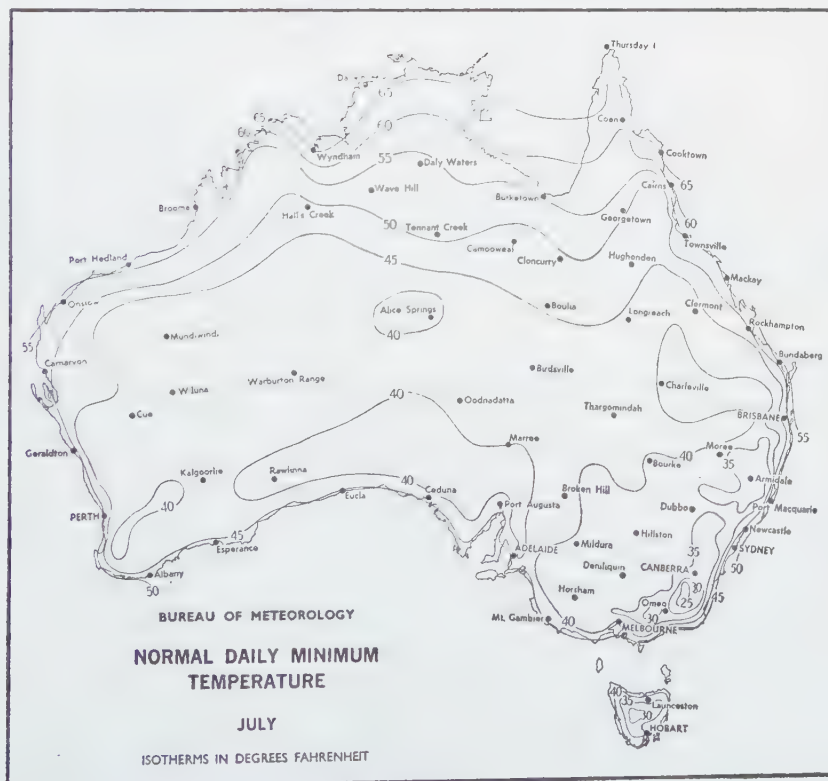
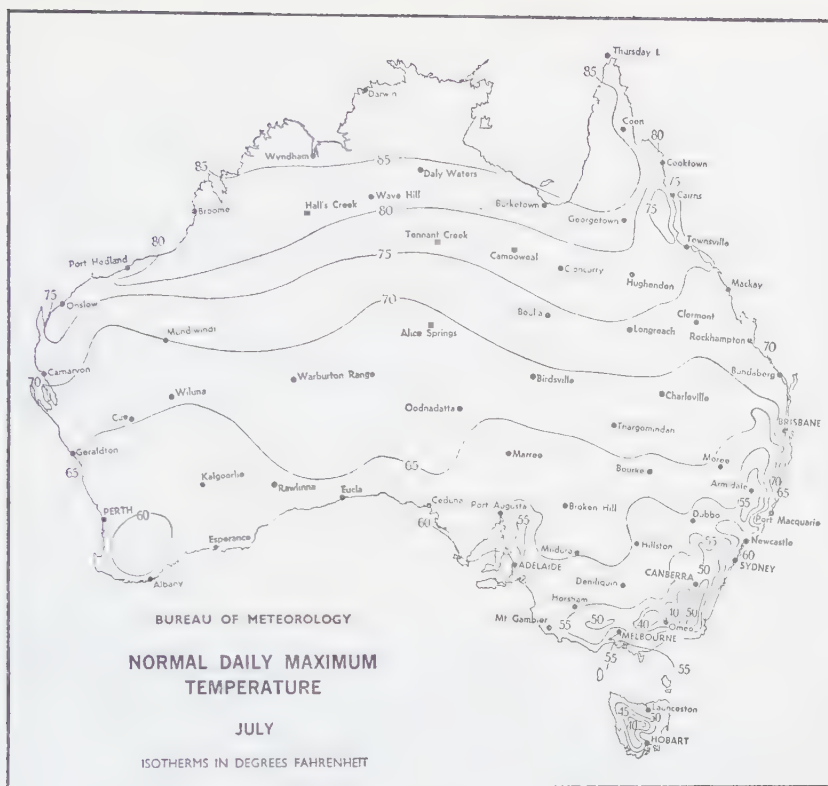
*High temperature.* Heat waves with a number of successive days higher than 100° F. are relatively common in many parts of Australia. With the exception of the north-western coast of Western Australia, however, most coastal areas do not usually experience more than a few days in succession of such conditions. The frequency of such conditions increases inland, and periods of up to twenty days have been recorded over most of the settled areas. This figure increases in western Queensland and north-western Western Australia to more than sixty days in places. The central part of the Northern Territory and the Marble Bar-Nullagine area of Western Australia have recorded the most prolonged heat waves for the Australian region. The longest consecutive period of daily maxima greater than 100° F. was 160 consecutive days recorded in Marble Bar during the summer of 1923-24.

*Frosts.* Injury to the tissues of growing plants is not caused until the temperature has fallen considerably below the freezing point of water (32° F.), and a ground frost is regarded as having occurred when the grass thermometer has fallen below 30.4° F. However, as terrestrial minima are not recorded at all stations, it is usual for statistical purposes to regard the registration of a screen thermometer of 36° F. as indicating a 'light' frost. A map showing frequency of days with screen minima higher than 36° F. (i.e. the frost free period) is reproduced in plate 10, page 42. A 'heavy' frost is taken as a screen reading of less than 32° F. A 'black' frost occurs with a combination of low temperature and low humidity, and, although frost crystals are not observed on the ground, damage takes place to the plant cells by the freezing and expansion of the moisture they contain.



PLATES 6 and 7





PLATES 8 and 9

The frequency of frost depends largely on altitude, latitude, and proximity to the sea, and locally, to a very large extent, on even minor variations in contour of the land. The parts of Australia which are most subject to frost are the eastern highlands from north-eastern Victoria to the western Darling Downs in southern Queensland. Most stations in this region experience more than ten nights a month with readings of 32° F. or under for three to five months of the year. On Tasmania's Central Plateau similar conditions occur for three to six months of the year. Heavy frosts are comparatively infrequent in Western Australia, except in parts of the south and south-west. In South Australia frosts are most frequent in the agricultural areas of the south-east.

Frosts may occur within a few miles of the coast over the whole continent except the Northern Territory and most of north Queensland. Regions in which frosts may occur at any time of the year comprise most of Tasmania, large areas of the tablelands of New South Wales, much of inland Victoria, particularly the north-east, and a small part in the extreme south-west of Western Australia. Over most of the interior of the continent, and on the highlands of Queensland as far north as the Atherton Plateau, frosts commence in April and end in September, but they are infrequent in these months. Minimum temperatures below 32° F. are experienced in most of the sub-tropical interior in June and July.

For further details of frost conditions in Australia reference should be made to Foley, J. C., *Frost in the Australian Region*, Bureau of Meteorology Bulletin No. 32 (1945).

### Humidity and saturation deficit

The annual variation of vapour pressure\* for regions outside the tropics closely follows that of temperature. However, the mean relative humidity† in the temperate regions is generally highest in winter and lowest during the summer. In northern Australia the highest relative humidity occurs during the rainy summer season. The relative humidity variation during the day closely follows the diurnal variation of temperature, being highest with low temperatures and lowest with high temperatures. The relative humidity at 9 a.m. for Australian conditions may be considered as a close approximation to the mean for the whole day. In the tables for the capital cities, pages 49-56, the mean monthly vapour pressure and relative humidity for 9 a.m., together with the monthly extremes are listed. The order of the stations in descending values of mean annual vapour pressure at 9 a.m. is Darwin, Brisbane, Sydney, Perth, Melbourne, Adelaide, Canberra, and Hobart, while the annual mean of the 9 a.m. relative humidities diminishes in the order Darwin, Sydney, Canberra, Melbourne, Brisbane, Hobart, Perth, and Adelaide.

In January the mean saturation deficit‡ at the mean temperature for the month has a maximum value of over 0.90 inches in the central parts of Western Australia and in south-western Queensland. Gradual decreases occur towards the coast, where values close to the north, east, and south coastlines are around 0.20 inches. On the western coast values are somewhat higher, and a strong gradient exists in the saturation deficit in the narrow region bordering the Indian Ocean. In July the variation is less, with maxima of 0.40 inches in the dry north of the Northern Territory and Western Australia, slowly decreasing generally to the south, with values over most of the south-east and extreme south-west of the continent being less than 0.10 inches. Extremely low values (less than 0.025 inches) exist in July over the highlands of south-eastern Australia and Tasmania.

### Evaporation

In Australia the study of evaporation is of great importance, since in its drier regions water conservation must be practised by the use of tanks and dams. The magnitude of the economic loss by evaporation may be appreciated from plate 11, page 42, which shows that the yearly amount varies from 20 inches over the highland areas of central Tasmania to more than 130 inches in the northern and north-western part of South Australia.

Over an area of some 70 per cent of the continent, comprising most inland districts and extending to the coast in the north-west of Western Australia and to the head of the Great Australian Bight, the rainfall does not exceed the evaporation loss in any month of the year. The central and north-western portion of the continent experience evaporation far in excess of their rainfall. Vegetation over these areas is characterised by acacia, scrub steppe, and arid scrub, while many areas are merely sand hills and stony desert. Over many of the drier areas, however, particularly in the inland areas of south-eastern Australia, the loss of rainfall by evaporation is made good to some extent by the development of irrigation schemes. Some of these schemes, such as those at the Murrumbidgee Irrigation Area in New South Wales and at Mildura in Victoria and Renmark in South Australia, have been very successful. The Snowy Mountains Hydro-electric Scheme has also resulted in the

\* Vapour pressure—the pressure exerted by the water vapour of the atmosphere. † Relative humidity—the ratio of the existing vapour pressure to the saturated vapour pressure at the existing temperature, expressed as a percentage.  
‡ Saturation deficit—the difference between the saturation vapour pressure and the actual vapour pressure. See Year Book No. 53, page 37 for further information.

large scale supply of water from the south-eastern highlands of Australia for use in the drier areas to the west of the ranges in New South Wales and Victoria. The future development of such schemes as these holds promise for the reclamation of many marginal areas in Australia, which because of low rainfall and high evaporation are at present of little economic value.

Since the loss by evaporation depends largely on the net radiation absorbed and consequently on the extent of the exposed area, tanks and dams so designed that the surface area shall be a minimum are advantageous. Further, the more protected they are from the direct rays of the sun and from winds by means of suitable tree planting the less will be the evaporation loss. The Mansfield process for the treatment of tanks and dams by a mono-molecular chemical film which materially reduces evaporation is a recent development which is already giving beneficial results, particularly on large water storage areas. Such improvements are of considerable importance to the pastoralists of the drier regions of Australia and to water supply authorities.

Further information on evaporation may be found in Hounam, C. E., *Evaporation in Australia*, Bureau of Meteorology Bulletin No. 44 (1961).

### Sunshine and cloud

The proportion of the sky covered by cloud is of considerable meteorological and climatological importance. A cloud cover inhibits both incoming and outgoing radiation and thus profoundly affects the temperature distribution and other factors at the earth's surface. Cloud amount is measured in eighths of the sky covered.

In Australia the seasonal changes in cloudiness correspond closely to that of rainfall. In the southern or more temperate parts of the continent, particularly in the coastal and low lying areas, the winter months are generally more cloudy than the summer. This is due to the formation of extensive areas of stratiform cloud and fog during the colder months, when the structure of the lower layers of the atmosphere favours the physical processes resulting in this type of cloud. A particularly strong annual periodicity exists in the monsoonal regions of northern Australia, where it is heavily clouded during the summer wet season and practically cloudless during the winter 'dry'. Cloudiness is higher near coasts and on the windward slopes of the mountains of eastern Australia and is least over the dry interior parts of the continent.

A close relationship exists between cloud amount and number of sunshine hours, and it is possible to estimate from cloud data the equivalent number of sunshine hours over a given period. These data can be incorporated with records of direct measurement of sunshine hours, and approximate distribution maps produced for Australia. Maps of the mean sunshine distribution for January and July are reproduced in plates 12 and 13, page 43 and indicate the main features of the variation over Australia in these months.

Except for Tasmania and a narrow fringe bordering the southern, eastern, and northern coasts, the greater part of the continent receives more than 3,000 hours of sunshine each year, and in Central Australia and the mid-western coast of Western Australia totals in excess of 3,500 hours occur. The extreme south coast receives in the main 2,000 to 2,500 hours annually, while the east coast regions of New South Wales and Queensland receive 2,500 to 3,000 hours. A minimum of less than 1,750 hours occurs on the west coast and highlands of Tasmania.

Mean amounts of cloud for each month at the capital cities are included in the tables on pages 49-56, as are the mean daily hours of sunshine. The latter figure is a good single measure of the relative climatic characteristics of the individual cities for different months of the year.

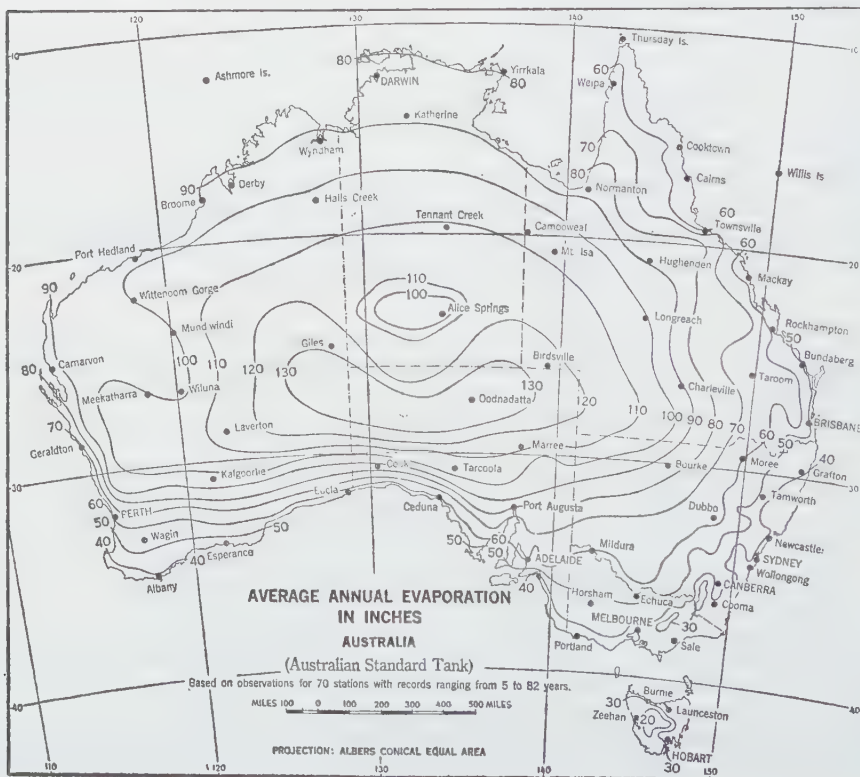
### Wind

Australia lies in those latitudes of the southern hemisphere where it is influenced largely by two wind systems:

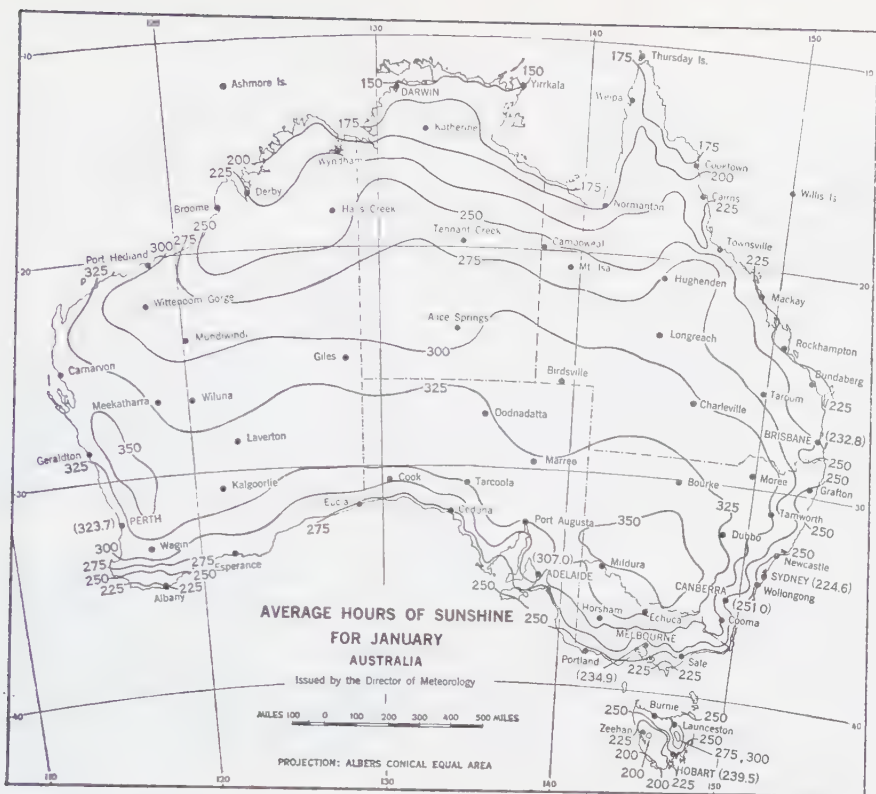
- (a) the south-east trade winds blowing on the equatorial side of the mid-latitude anticyclones; and
- (b) the westerlies south of the mid-latitude anticyclones in which successive low pressure systems move eastward over the Southern Ocean.

The only pronounced seasonal variations of atmospheric pressure in the middle and high latitudes of the southern hemisphere are related to the latitudinal shift in the axes of the sub-tropical high pressure systems and to the change in the tracks of the migratory anticyclones. The latter systems move generally from west to east in the Australian region between the semi-permanent oceanic anticyclones of the Indian and Pacific Oceans. The mean path of these systems lies over southern Australia during the summer but moves northwards during the winter with the thermal equator. The movement is only of a few degrees of latitude but it is of very great importance to the climate of the Australian





PLATES 10 and 11



continent. During the summer months, when the anti-cyclones move on a more southerly track, the south-east trades affect the whole coast of eastern Australia north of around latitude  $30^{\circ}$  S., the westerlies retreating to higher latitudes, and conditions are more settled over southern Australia which then lies close to the axis of the anticyclones. In winter the anticyclones move further north, the trades affect only the northern parts of the continent, and southern Australia is exposed to the westerlies of the Southern Ocean.

In summer, with the retreat of the anticyclones to the south, the whole of northern and north-western Australia is exposed initially to light wind systems, and then during the period from December to April to the effects of the north-west monsoon. This process, which is associated with an inflow of north-west winds and intensive rains, is not as regular or persistent as the south-west monsoon of south-east Asia. However, it is a sufficiently regular feature of the climate of northern Australia to be designated as the north-west season, or, as it is best known in the area, 'the wet'. Its influence affects areas as far south as central Queensland, but southern Queensland and the area east of the Great Dividing Range are largely still under the influence of the south-east trades. Fringe or marginal areas on the southern limits of the monsoonal penetration over the continent have a shorter and more uncertain 'wet' season, which in some years fails to appear at all. With the northward advance of the anticyclones in autumn, the monsoon gives way again to the trades, and 'the dry' of northern and north-western Australia commences.

The general features of these wind patterns may be seen in the wind rose diagrams of plates 14 and 15, pages 45–6. It is important, however, to note the dynamic nature of the atmosphere, and that the continual growth, decay, and motion of the pressure systems result in a wide diversity of wind-flow types. Descriptions of wind conditions for particular geographical areas and seasons can thus be only of a very generalised kind. Further, local features can also be imposed on the overall wind pattern—channelling of winds due to topography (e.g. the high frequency of north-west winds in Hobart) and the marked summer sea breeze characteristics of most of the Australian coast, particularly near the Great Australian Bight as shown in the diagrams of 3 p.m. wind frequencies.

### Storms and tropical cyclones

In general there are two types of weather systems in Australia which produce very strong winds and heavy rainfalls over large areas of the continent:

- (a) the active depressions which move westwards over the Southern Ocean; and
- (b) the tropical cyclones or hurricanes of north-eastern and north-western Australia.

During the winter the southern shores of the continent are subject to the deep depressions of the southern low pressure belt. They are felt most severely over the south-west of Western Australia, the south-east of South Australia, southern Victoria, and Tasmania, and may move inland in all these regions bringing strong winds and heavy rainfall. Further extensions of this type of system frequently develop close to the coast of New South Wales, often bringing severe weather to this region and to southern Queensland. These are generally known as 'east coast lows'.

The frontal systems (i.e. the narrow zones characterised by cloud and bad weather separating two air masses of different density) which are associated with these depressions vary widely in character. A common type in south-east Australia is a cold front located in a  $\Lambda$  shaped trough. Such a system usually brings very strong north to north-west winds in advance of the front with a very abrupt backing of the wind to colder west to south-westerly winds after the frontal passage. Such frontal passages are, in their most severe form, associated with thunderstorms and line squalls, heavy rain, and a change to cold winds and showers. These violent changes with the passage of a cold front and strong southerly winds frequently affect the New South Wales coast as far north as Newcastle during the winter, and are popularly known as 'southerly busters'.

The most extensive rains of inland Australia occur when moist tropical air which has moved inland is lifted by convergence ahead of a slow moving colder air mass moving from the Southern Ocean. The coast of Queensland, particularly the section from Cooktown to Mackay and the adjacent waters, is subject to visitations by tropical cyclones (the 'hurricanes' of the Caribbean and 'typhoons' of the China Sea). These destructive systems can affect this region from December to April, normally forming in the Coral Sea, moving south-west close to the coast and then passing away to the south-east into the Pacific. They may, however, cross the coast from time to time and bring torrential rain and violent winds (often more than 100 mph) to the coastal regions.

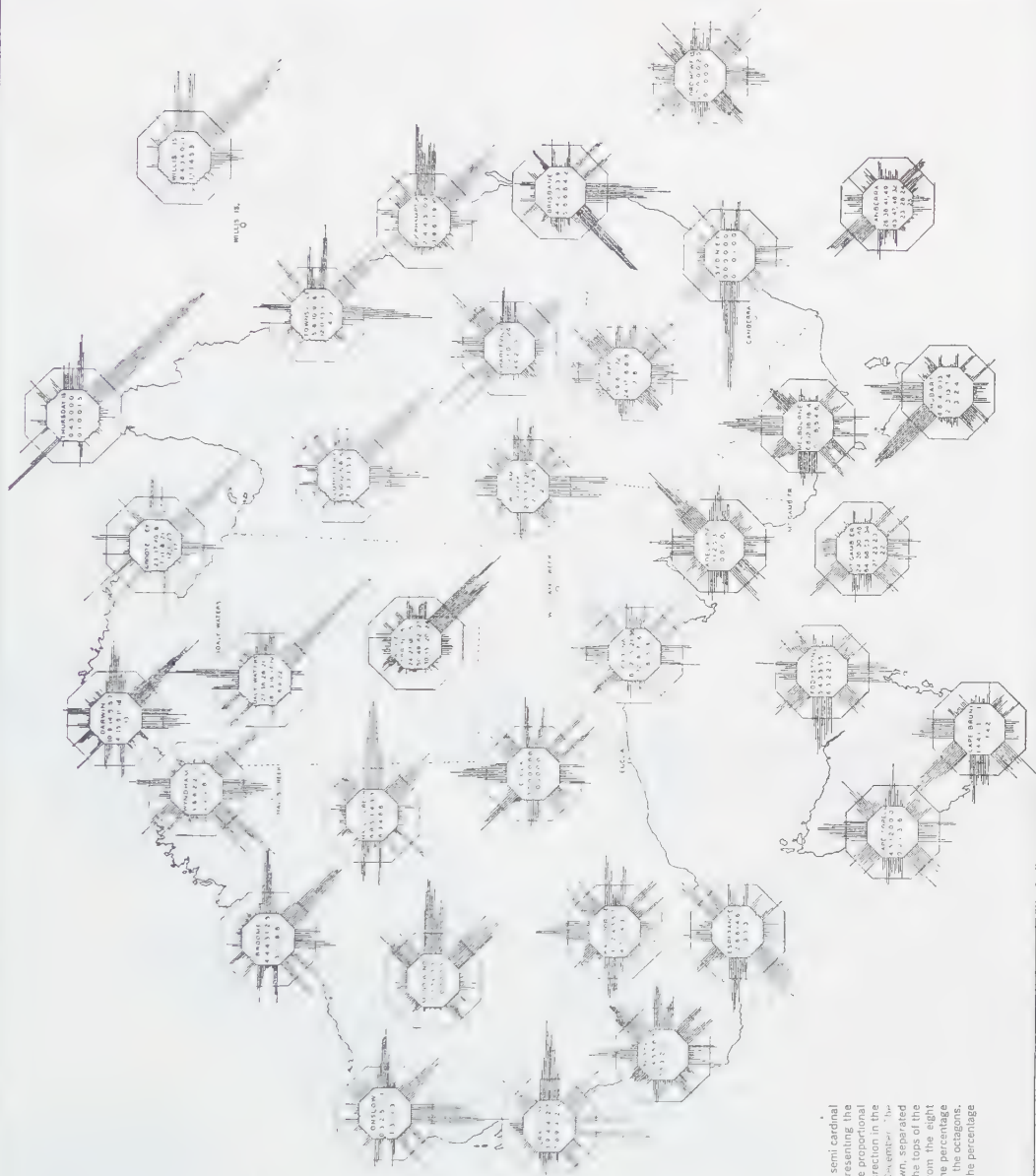
Similar systems affect the north-west coast of Western Australia where they bear the local name of 'willy willies', a name which is, however, often used generally in Australia for minor local whirlwinds or dust devils. The season in this region generally lasts from November to April, the storms originating in the Timor or Arafura Seas travelling usually south-west and approaching the coast most commonly between latitudes  $20^{\circ}$  S. and  $22^{\circ}$  S. Thence the systems may move southwards following the coast,



# WIND ROSES

9 A.M.

SHOWING MONTHLY PERCENTAGE  
FREQUENCY DISTRIBUTION OF  
WIND DIRECTIONS TO EIGHT  
POINTS OF THE COMPASS



## EXPLANATION

The sides of the octagons face towards the cardinal and semi-cardinal points. Projections from each side are twelve columns, representing the twelve months of the year, and the lengths of the columns are proportional to the percentage frequencies of the winds from the given direction in the successive months: *January, February, March, April, May, June, July, August, September, October, November, December.* The scale is shown above, and the outer octagons have been drawn, separated from the inner octagons by a distance representing 17 1/2%. The tops of the columns would all be on these outer octagons, if winds from the eight cardinal points only were considered. The small dashes within the octagons indicate the frequency of calms in the 12 months is shown by the length of the column. Small dashes within the inner octagons indicate months when the percentage of winds from that direction is practically zero.

## WIND ROSES

SHOWING MONTHLY PERCENTAGE  
FREQUENCY DISTRIBUTION OF  
WIND DIRECTIONS TO EIGHT  
POINTS OF THE COMPASS



The sides of the octagons are parallel to the cardinal and semi-cardinal points. Projecting from each side an arc towards the center, with a radius of twelve months of the year, and the lengths of the columns are proportional to the percentage frequencies of the winds from the given direction in the twelve months of the year. The wind rose was drawn clockwise from January to December. The scale is shown above the wind rose by a distance representing 12%, i.e., separated from the inner octagons by a distance representing 12%, i.e., from the eight octagons would all be on these outer octagons if winds from the eight directions were equally frequent and there were no calms. The percentage frequencies are shown by the numbers within the octagons. Small dashes within the inner octagons indicate months when the percentage of winds from that direction is practically zero.

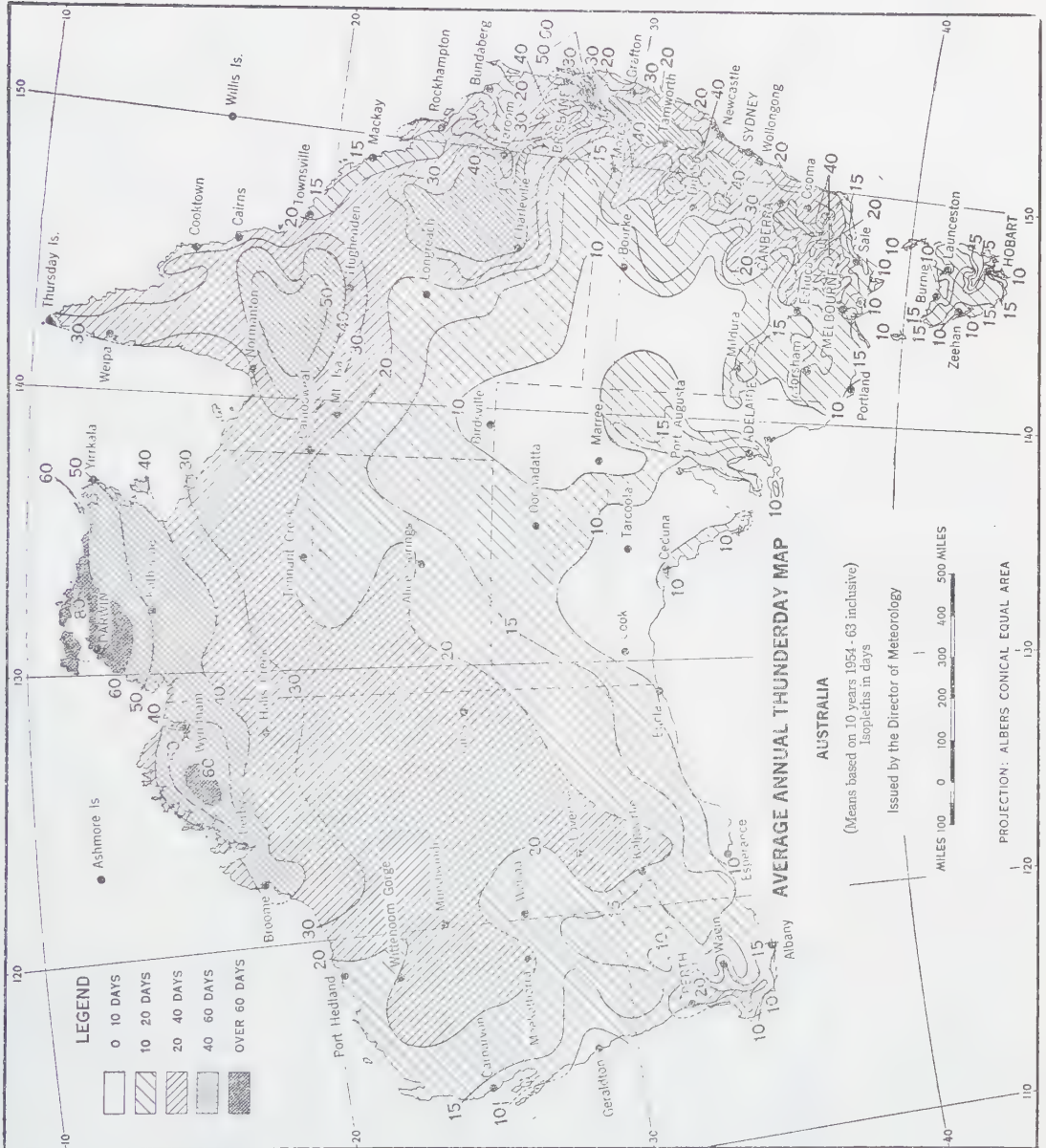


PLATE 16



or sometimes cross inland bringing high rainfalls to the otherwise dry interior of the continent. A further region which is affected somewhat less frequently by tropical cyclones is the coast of Arnhem Land in the Northern Territory and the waters and coasts of the Gulf of Carpentaria.

Tropical cyclones, in general, soon lose their intensity on crossing from sea to land, but, although the wind force rapidly abates, they are still capable of producing the heavy rainfall which leads to flooding of coastal rivers, damage to stock and property, and general disruption of transport.

Thunderstorms which bring local heavy rain and strong winds are common to most of Australia. They are also of particular importance because of the lightning damage which they cause to power transmission lines, and have been extensively studied for the purpose of siting electrical installations as far as possible in areas of low thunderstorm occurrence. Plate 16, page 47, shows the number of days annually on which thunder is heard, which is a better observational criterion than lightning observed. The region of maximum thunderstorm activity is the extreme north-west of the continent and the region south-east of the Gulf of Carpentaria. In the more settled areas maximum thunderstorm occurrence is in central western and south-eastern Queensland and the highland areas of New South Wales. The minimum number of storms occur over the interior of South Australia, western New South Wales, and eastern Tasmania.

#### **Climatological tables**

The averages and extremes for a number of elements which have been determined from long series of observations at the Australian capitals up to and including the year 1970 (data for Canberra up to 1971) are given in the following pages, together with more limited data for the larger country towns of the Commonwealth.

Barometric and vapour pressure data, which were expressed in inches of mercury in years before 1966, are now expressed in millibars (1 millibar = 0.02953 inches of mercury).

The following points apply, except where otherwise stated. Where records are available, prevailing winds have been determined over a standard period of thirty years from 1911 to 1940. Other averages and extremes, including evaporation, temperature, and rainfall records for which thirty years normals have been published for a number of years past, have, since 1965, been extracted from all available years of actual record, but the number of years quoted does not include intervening periods when observations were temporarily discontinued.

## CLIMATOLOGICAL DATA: PERTH, WESTERN AUSTRALIA

(Lat. 31° 57' S., Long. 115° 52' E. Height above M.S.L. 51 ft)

## BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	Bar. corrected to 32° F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m.bars)	Wind (height of anemometer 71 ft)				Prevailing direction	Mean amt evapo- ration (in)	No. days thun- der	Mean amt clouds 9 a.m., 3 p.m., 9 p.m. (a)	No. clear days	
		Aver- age miles per hour	Highest mean speed in one day (mph)	High- est gust speed (mph)	9 a.m.						3 p.m.
No. of years of obser- vations . . . . .	86	30(b)	70	72	30(b)	30(b)	72	74	30(b)	30(b)	
January . . . . .	1,012.6	10.9	26.3	27/98	50	E	SSW	10.38	0.8	2.3	14
February . . . . .	1,013.0	10.7	21.5	6/08	54	ENE	SSW	8.77	0.7	2.5	13
March . . . . .	1,015.3	10.1	21.5	6/13	70	E	SSW	7.66	0.7	2.8	12
April . . . . .	1,017.9	8.5	31.5	25/00	63	ENE	SSW	4.67	0.8	3.4	9
May . . . . .	1,017.9	8.4	27.3	29/32	74	NE	WSW	2.83	2.7	4.3	6
June . . . . .	1,017.6	8.4	30.2	17/27	80	N	NW	1.89	1.9	4.7	5
July . . . . .	1,018.9	8.8	33.5	20/26	85	NNE	W	1.84	1.5	4.5	5
August . . . . .	1,018.8	9.4	31.9	15/03	97	N	WNW	2.84	1.3	4.5	6
September . . . . .	1,018.4	9.4	28.5	11/05	68	ENE	SSW	3.57	0.7	3.9	8
October . . . . .	1,017.0	10.0	26.7	6/16	65	SE	SW	5.51	0.7	3.8	8
November . . . . .	1,015.5	10.7	25.7	18/97	63	E	SW	7.63	0.8	3.1	9
December . . . . .	1,013.4	11.0	25.6	6/22	64	E	SSW	9.74	1.0	2.6	13
Year { Totals . . . . .	..	..	..	..	..	..	67.33	13.6	..	108	..
Averages . . . . .	1,016.4	9.7	..	..	..	E	SSW	..	..	3.5	..
Extremes . . . . .	..	..	33.5	97	..	..	..	..	..	..	..
			20/7/26								

(a) Scale 0-8. (b) Standard thirty years normal (1911-1940).

## TEMPERATURE AND SUNSHINE

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme temperature (°Fahr.)		Mean daily hours sun- shine
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass	
No. of years of observations	74	74	74	74	74	63(a)	72	73
January	85.0	63.6	74.3	110.7 29/56	48.6 20/25	177.3 22/14	39.5 20/25	10.3
February	85.5	63.9	74.7	112.2 8/33	47.7 1/02	173.7 4/34	39.8 1/13	10.0
March	81.8	61.6	71.7	106.4 14/22	45.8 8/03	167.0 19/18	36.7 (b)	8.8
April	76.0	57.2	66.6	99.7 9/10	39.3 20/14	157.0 8/16	30.8 26/60	7.2
May	69.1	52.7	60.9	90.4 2/07	34.3 11/14	146.0 4/25	25.0 31/64	5.8
June	64.5	49.9	57.2	81.7 2/14	34.9 22/55	135.5 9/14	25.9 27/46	4.7
July	63.0	47.9	55.5	76.4 21/21	34.2 7/16	133.2 13/15	25.1 30/20	5.3
August	64.1	48.2	56.1	82.0 21/40	35.4 31/08	145.6 29/24	26.5 18/60	6.1
September	66.8	50.1	58.5	90.9 30/18	36.7 6/56	153.6 29/16	27.2 (c)	7.1
October	70.0	52.5	61.3	99.1 29/67	39.6 6/68	161.2 19/54	29.8 16/31	8.2
November	76.1	56.8	66.5	104.6 24/13	42.0 1/04	167.0 30/25	34.8 1/68	9.6
December	81.1	60.8	70.9	108.1 31/68	47.5 29/57	168.8 11/27	38.0 29/57	10.4
Year { Averages	73.6	55.5	64.6	112.2	34.2	177.3	25.0	7.8
Extremes.	..	..	..	8/2/33	7/7/16	22/1/14	31/5/64	..

(a) Records discontinued 1963. (b) 8/1903 and 16/1967. (c) 8/1952 and 6/1956.

## HUMIDITY, RAINFALL, AND FOG

Month	Vapour pres- sure mean 9 a.m. (m.bars)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)				Fog Mean No. days	
		Meas.	Highest mean	Lowest mean	Mean mthly	Mean No. of days of rain	Greatest monthly	Least monthly		
No. of years of observa- tions . . . . .	30(a)	30(a)	74	74	95	95	95	95	95	74
January . . . . .	14.8	51	63	41	0.32	3	2.17	1879	Nil (b)	1.74 27/79
February . . . . .	14.7	51	65	43	0.45	3	6.55	1955	Nil (b)	3.43 17/55
March . . . . .	14.7	57	66	46	0.79	4	5.71	1934	Nil (b)	3.03 9/34
April . . . . .	13.4	61	75	51	1.83	8	5.85	1926	Nil 1920	2.62 30/04
May . . . . .	12.4	70	81	61	4.96	14	12.13	1879	0.77 1949	3.00 17/42
June . . . . .	11.4	75	85	68	7.39	17	18.75	1945	2.16 1877	3.00 10/20
July . . . . .	10.9	76	88	69	6.85	18	16.73	1958	2.42 1876	3.00 4/91
August . . . . .	10.7	71	83	62	5.49	18	12.53	1945	0.46 1902	2.91 14/45
September . . . . .	11.6	66	75	58	3.15	14	7.84	1923	0.34 1916	1.86 18/66
October . . . . .	11.7	60	75	52	2.15	12	7.87	1890	0.15 1946	1.97 4/67
November . . . . .	12.7	52	66	41	0.82	6	2.78	1916	Nil 1891	1.54 29/56
December . . . . .	13.9	51	63	39	0.58	4	3.17	1951	Nil (b)	1.84 3/51
Year { Totals . . . . .	..	..	..	..	34.78	121	..	..	..	8.6
Averages . . . . .	12.7	62	..	..	..	..	..	..	..	..
Extremes . . . . .	..	..	88	39	..	..	18.75	..	Nil (c)	3.90
							6/1945			10/6/20

(a) Standard thirty years normal (1911-1940). (b) Various years. (c) November to April, various years.

Figures such as 27/98, 29/56, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates in italics relate to nineteenth century.

## CLIMATOLOGICAL DATA: DARWIN, NORTHERN TERRITORY

(Lat. 12° 28' S., Long. 130° 51' E. Height above M.S.L. 97 ft)

## BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	Bar. corrected to 32° F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m.bars)	Wind (height of anemometer 117 ft) Average miles per hour	Highest mean speed in one day (mph)	Highest gust speed (mph)	Prevailing direction		Mean amt evaporation (in)	No. days thunder	Mean amt clouds 9 a.m., 3 p.m., 9 p.m. (a)	No. clear days
					9 a.m.	3 p.m.				
No. of years of observations	85	15	..	17(b)	..	..	9	30	30	30
January	1,006.1	6.1	..	66	NW & S	W & NW	6.04	13.0	5.7	1
February	1,006.3	6.7	..	63	W & S	W & NW	5.61	10.0	5.6	1
March	1,007.2	5.3	..	98	SE	W & NW	6.14	10.0	5.0	3
April	1,009.2	6.1	..	42	SE	E	6.49	4.0	2.8	11
May	1,010.9	6.5	..	39	SE	E	7.27	0.2	1.7	19
June	1,012.2	6.5	..	40	SE	E & SE	6.97	0.0	1.3	22
July	1,012.7	6.2	..	39	SE	E & SE	7.05	0.0	1.1	23
August	1,012.6	5.9	..	45	SE	NW & N	7.73	0.0	1.0	23
September	1,011.7	6.2	..	40	SE & S	NW & N	8.07	1.0	1.6	18
October	1,010.5	6.2	..	53	S	NW & N	9.17	5.0	2.6	10
November	1,008.7	5.5	..	73	W & S	NW & N	8.20	12.0	3.8	4
December	1,006.9	6.2	..	66	NW & S	NW & N	7.18	14.0	4.8	2
Year { Totals	..	..	..	..	..	..	85.92	69.2	..	137
Year { Averages	1,009.6	6.1	..	..	SE	NW	..	..	3.1	..
Year { Extremes	..	..	..	98	..	..	..	..	..	..

(a) Scale 0-8. (b) Several incomplete years.

## TEMPERATURE AND SUNSHINE

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme temperature (°Fahr.)		Mean daily hours sunshine
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass	
No. of years of observations	85	85	85	86(a)	86(a)	26(b)	..	15
January	89.9	77.0	83.5	100.0 2/82	68.0 20/92	168.0 26/42	..	5.8
February	89.5	76.6	83.1	100.9 20/87	63.0 25/49	163.6 (c)	..	6.2
March	90.4	76.6	83.5	102.0 (d)	66.6 31/45	165.6 23/38	..	6.9
April	91.7	75.5	83.6	104.0 7/83	60.8 11/43	163.0 1/38	..	8.3
May	90.2	72.2	81.2	102.3 8/84	57.5 28/67	160.0 5/20	..	9.5
June	87.7	68.9	78.3	98.6 17/37	53.8 23/63	155.2 2/16	..	9.8
July	86.9	67.2	77.1	98.0 17/88	50.7 29/42	156.0 28/17	..	9.8
August	88.7	69.3	79.0	98.0 19/00	56.4 11/63	156.2 28/16	..	10.4
September	90.9	73.6	82.3	102.0 20/82	62.1 9/63	157.0 (e)	..	9.9
October	92.6	77.0	84.8	104.8 17/92	66.9 8/66	160.5 30/38	..	9.5
November	92.9	77.6	85.3	103.3 9/84	66.8 4/50	170.4 14/37	..	8.2
December	91.7	77.6	84.7	102.0 9/83	65.0 4/60	169.0 26/23	..	6.9
Year { Averages	90.3	74.1	82.2	..	..	..	..	8.4
Year { Extremes	..	..	..	104.8 17/10/1892	50.7 29/7/42	170.4 14/11/37	..	..

(a) Years 1882-1941 at Post Office, 1942-1966 at Aerodrome; sites not strictly comparable. (b) Records discontinued 1942. (c) 5/1938 and 23/1938. (d) 26/1883 and 27/1883. (e) 28/1916 and 3/1921.

## HUMIDITY, RAINFALL, AND FOG

Month	Vapour pressure mean 9 a.m. (m.bars)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)				Fog Mean No. days
		Mean	Highest mean	Lowest mean	Mean mthly	No. of days of rain	Greatest monthly	Least monthly	
No. of years of observations	85	85	57(a)	57(a)	86(b)	69	100(c)	100(c)	30
January	31.1	80	89	69	15.40	19	27.86 1896	2.67 1906	11.67 7/97
February	31.1	81	88	71	13.00	18	28.23 1956	0.53 1931	11.00 18/55
March	30.7	80	84	69	10.24	17	23.42 1965	0.81 1911	7.18 6/19
April	27.0	72	80	60	4.05	8	23.74 1891	Nil 1950	6.22 4/59
May	21.8	65	76	49	0.56	1	10.27 1882	Nil (d)	2.19 6/22
June	18.7	63	75	52	0.12	0	1.53 1902	Nil (d)	1.32 10/02
July	17.6	62	71	47	0.05	0	2.56 1900	Nil (d)	1.71 2/00
August	20.6	66	73	53	0.06	0	3.30 1947	Nil (d)	3.15 22/47
September	24.7	68	73	54	0.51	2	4.26 1942	Nil (d)	2.78 21/42
October	27.7	68	72	60	1.98	5	13.34 1954	Nil (d)	3.74 18/56
November	29.3	70	75	62	4.96	11	15.72 1938	0.40 1870	4.73 9/51
December	30.5	75	83	65	9.55	16	22.94 1965	0.98 1934	7.87 28/10
Year { Totals	..	..	..	..	60.48	97	..	..	..
Year { Averages	25.9	71	..	..	..	..	..	..	2.4
Year { Extremes	..	..	89	47	..	..	28.23 2/1956(f)	Nil (e)	11.67 7/1/1897

(a) 1882 to 1938 at Post Office. (b) 1869 to 1962 at Post Office, eight years missing. (c) The figures below are the highest or lowest recorded at either the Post Office or Aerodrome sites. (d) Various years. (e) April to October, various years. (f) 30.65 inches were recorded February 1967 at Darwin Regional Office. Records from this office will be incorporated in future tables. Figures such as 2/82, 26/42, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates in italics relate to nineteenth century.



CLIMATOLOGICAL DATA: ADELAIDE, SOUTH AUSTRALIA

(Lat. 34° 56' S., Long. 138° 35' E. Height above M.S.L. 140 ft)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	Bar. corrected to 32° F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m.bars)	Wind (height of anemometer 75 ft)					Mean amt evapo- ration (in)	No. days thun- der	Mean amt clouds	
		Aver- age miles per hour	Highest mean speed in one day (mph)	High- est gust speed (mph)	Prevailntg direction				9 a.m., 3 p.m., 9 p.m. (a)	No. clear days
					9 a.m.	3 p.m.				
No. of years of obser- vations . . . . .	114	19(b)	19(b)	54	30(c)	30(c)	95(d)	99	103	56
January . . . . .	1,013.3	8.0	20.0 12/70	72	SW	SW	9.29	1.5	2.9	12.2
February . . . . .	1,014.3	7.5	17.8 25/67	66	NE	SW	7.52	1.1	3.0	10.7
March . . . . .	1,017.2	7.1	19.1 24/64	78	S	SW	6.26	0.8	3.2	10.7
April . . . . .	1,019.8	7.0	23.2 10/56	81	NE	SW	3.78	1.0	4.1	6.6
May . . . . .	1,020.1	7.0	23.5 19/53	70	NE	NW	2.30	1.0	4.7	4.6
June . . . . .	1,019.7	7.2	18.5 16/70	67	NE	N	1.47	0.9	5.0	3.9
July . . . . .	1,020.0	7.3	20.4 13/64	92	NE	NW	1.47	0.8	4.8	3.6
August . . . . .	1,019.1	8.0	23.7 8/55	75	NE	SW	2.09	1.1	4.2	4.9
September . . . . .	1,017.6	8.2	21.7 16/65	69	NNE	SW	3.18	1.4	4.3	5.6
October . . . . .	1,016.0	8.5	22.0 1/68	75	NNE	SW	5.03	1.9	4.2	5.7
November . . . . .	1,015.1	8.6	22.5 14/68	81	SW	SW	6.78	2.0	3.9	6.6
December . . . . .	1,013.3	8.3	19.3 18/69	75	SW	SW	8.62	1.5	3.4	9.0
Year { Totals . . . . .	..	..	..	..	..	..	57.79	15.0	..	84.1
Averages . . . . .	1,017.1	7.7	..	..	NE	SW	..	..	4.0	..
Extremes . . . . .	..	..	23.7	92	..	..	..	..	..	..
			8/8/55							

(a) Scale 0-8. (b) Records taken from a Munro Anemometer 1952-1970. (c) Standard thirty years normal (1931-1960). (d) Measured by Australian tank (1870-1962).

TEMPERATURE AND SUNSHINE

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme temperature (°Fahr.)		Mean daily hours sun- shine
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass	
No. of years of observations	114	114	114	114	114	54(a)	110	89
January	85.4	61.5	73.5	117.7 12/39	45.1 21/84	180.0 18/82	36.5 14/79	10.0
February	84.9	61.8	73.3	113.6 12/99	45.5 23/18	170.5 10/00	35.8 23/26	9.3
March	80.4	59.0	69.7	110.5 9/34	43.9 21/33	174.0 17/83	32.1 21/33	7.8
April	72.9	54.6	63.7	98.6 5/38	39.6 15/59	155.0 1/83	28.0 14/63	5.9
May	65.6	50.4	58.0	89.5 4/21	36.9 (b)	148.2 12/79	25.6 19/28	4.8
June	60.5	46.9	53.7	78.1 4/57	32.5 (c)	138.8 18/79	21.0 24/44	4.2
July	58.9	44.9	51.9	74.0 11/06	32.0 24/08	134.5 26/90	22.1 30/29	4.3
August	61.6	46.0	53.8	85.0 31/11	32.3 17/59	140.0 31/92	22.8 11/29	5.2
September	66.1	48.1	57.1	95.1 30/61	32.7 4/58	160.5 23/82	25.0 25/27	6.1
October	71.8	51.5	61.7	102.9 21/22	36.1 20/58	162.0 30/21	26.6 22/66	7.2
November	77.5	55.2	66.3	113.5 21/65	40.8 2/09	166.9 20/78	31.5 2/09	8.5
December	82.1	58.8	70.5	114.6 29/31	43.0 (d)	175.7 7/99	32.5 4/84	9.4
Year { Averages	72.3	53.2	62.7	117.7	32.0	180.0	21.0	6.9
Extremes	..	..	..	12/1/39	24/7/08	18/1/1882	24/6/44	..

(a) Records incomplete 1931-1934. Discontinued 1934. (b) 26/1895 and 24/1904. (c) 27/1876 and 24/1944. (d) 16/1861 and 4/1906.

HUMIDITY, RAINFALL, AND FOG

Month	Vapour pres- sure mean 9 a.m. (m.bars)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)				Fog Mean No. days	
		Mean	Highest mean	Lowest mean	Mean mthly	Mean No. of days of rain	Greatest monthly	Least monthly		Greatest in one day
No. of years of observa- tions . . . . .	103	103	103	103	132	132	132	132	71	
January . . . . .	11.9	40	59	29	0.76	4	3.31 1941	Nil (a)	2.30 2/89	
February . . . . .	12.3	43	57	30	0.79	4	6.09 1925	Nil (a)	5.57 7/25	
March . . . . .	11.7	47	62	29	0.94	5	4.59 1878	Nil (a)	3.50 5/78	
April . . . . .	11.3	56	72	37	1.71	10	5.81 1938	Nil 1945	3.15 5/60	
May . . . . .	10.8	67	76	49	2.72	13	7.75 1875	0.10 1934	2.75 1/53	
June . . . . .	9.9	75	84	63	2.87	15	8.58 1916	0.23 1958	2.11 1/20	
July . . . . .	9.4	76	87	66	2.60	16	5.44 1890	0.39 1899	1.75 10/65	
August . . . . .	9.7	70	78	54	2.44	16	6.20 1852	0.33 1944	2.23 19/51	
September . . . . .	9.9	60	72	44	2.00	13	5.83 1923	0.27 1951	1.59 20/23	
October . . . . .	10.3	51	67	29	1.72	11	5.24 1949	0.04 1969	2.24 16/08	
November . . . . .	10.5	44	58	31	1.21	8	4.45 1839	0.05 1967	2.96 12/60	
December . . . . .	11.1	40	56	31	1.04	6	3.98 1861	Nil 1904	2.42 23/13	
Year { Totals . . . . .	..	..	..	..	20.80	121	..	..	..	
Averages . . . . .	10.7	56	..	29	..	..	..	..	..	
Extremes . . . . .	..	..	87	29	..	..	8.58	Nil (b)	5.57	
							6/1916		7/2/25	

(a) Various years. (b) December to April, various years.

Figures such as 3/55, 21/84, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates in italics relate to nineteenth century.

CLIMATOLOGICAL DATA: BRISBANE, QUEENSLAND

(Lat. 27° 28' S., Long. 153° 2' E. Height above M.S.L. 134 ft)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	Bar. corrected to 32° F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m.bars)	Wind (height of anemometer 105 ft)				Mean amt evapo-ration (in)	No. days thun-der	Mean amt clouds 9 a.m., 3 p.m., 9 p.m. (a)	No. clear days	
		Aver- age miles per hour	Highest mean speed in one day (mph)	High- est gust speed (mph)	Prevailing direction					
										9 a.m.
No. of years of observa- tions	84	55	55	55	30(b)	30(b)	62	84	79	63
January	1,011.7	7.7	19.7	23/47	SE	NE	6.98	4.6	4.6	3.4
February	1,012.5	7.5	23.2	21/54	SE	NE	5.54	3.8	4.7	2.4
March	1,014.6	7.2	20.3	1/29	S	E	5.29	2.3	4.3	5.5
April	1,017.3	6.5	16.7	3/25	S	E	4.35	1.5	3.6	7.9
May	1,018.4	6.2	17.9	17/26	SW	SE	3.41	0.6	3.3	9.9
June	1,018.5	6.3	19.0	14/28	SW	W & SW	2.74	0.5	3.3	10.5
July	1,018.8	6.1	22.0	13/54	SW	W & SW	2.94	0.4	2.9	13.3
August	1,018.9	6.3	14.8	4/35	SW	NE	3.79	1.4	2.6	13.5
September	1,017.5	6.5	16.1	1/48	S	NE	4.64	2.9	2.7	12.7
October	1,016.0	6.9	15.7	1/41	S	NE	5.86	4.4	3.4	8.5
November	1,014.2	7.2	15.5	10/28	SE & N	NE	6.57	5.7	3.9	6.0
December	1,012.1	7.5	19.5	15/26	SE	NE	7.23	6.8	4.3	4.3
Year { Totals	..	..	..	..	..	..	59.34	34.9	..	97.9
Year { Averages	1,015.9	6.8	..	..	SW	NE	..	..	3.6	..
Year { Extremes	..	..	23.2	79	..	..	..	..	..	..
21/2/54										

(a) Scale 0-8. (b) Standard thirty years normal (1911-1940).

TEMPERATURE AND SUNSHINE

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme temperature (°Fahr.)		Mean daily hours sun- shine
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass	
No. of years of observations	84	84	84	84	84	50(a)	83	62
January	84.9	69.0	76.9	109.8	26/40	58.8	4/93	7.6
February	84.1	68.7	76.5	105.7	21/25	58.5	23/31	7.1
March	82.1	66.6	74.3	101.8	13/65	52.4	29/13	6.8
April	78.9	61.6	70.2	95.2	(b)	44.4	25/25	7.1
May	73.6	55.6	64.6	90.3	21/23	40.6	30/51	6.8
June	69.4	51.3	60.3	88.9	19/18	36.3	29/08	6.5
July	68.5	48.9	58.8	84.3	23/46	36.1	(c)	7.1
August	71.2	50.2	60.7	91.0	14/46	36.9	13/64	7.9
September	75.2	54.8	65.0	100.9	22/43	40.7	1/96	8.3
October	79.0	60.1	69.5	105.3	30/58	43.3	3/99	8.3
November	82.0	64.3	73.2	106.1	18/13	48.5	2/05	8.2
December	84.5	67.4	75.8	105.9	26/93	56.3	5/55	8.1
Year { Averages	77.8	59.9	68.8	109.8	..	36.1	..	7.5
Year { Extremes	..	..	..	109.8	26/1/40	36.1	(c)	..
						169.0	2/1/37	23.9
						157.4	31/18	11/7/1890
						165.5	26/03	..
						155.4	3/18	..
						162.3	7/89	..
						165.9	28/42	..
						..	..	..
						2/1/37	..	..
						11/7/1890	..	..

(a) From 1887 to March 1947, excluding 1927 to 1936. (b) 9/1896 and 5/1903. (c) 12/1894 and 2/1896.

HUMIDITY, RAINFALL, AND FOG

Month	Vapour pres- sure mean 9 a.m. (m.bars)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)					Fog Mean No. days			
		Mean	Highest mean	Lowest mean	Mean mthly	Mean No. of days of rain	Greatest monthly	Least monthly	Greatest in one day				
No. of years of observa- tions	64(a)	84	83	83	111	111	118(b)	118(b)	118(b)	84			
January	21.7	66	79	53	6.28	13	27.72	1895	0.32	1919	18.31	21/87	0.5
February	22.0	69	82	55	6.28	13	40.39	1893	0.58	1849	10.61	6/31	0.6
March	20.9	71	85	56	5.76	15	34.04	1870	Nil	1849	11.18	14/08	1.2
April	17.5	71	80	56	3.45	12	15.28	1867	0.04	1944	5.46	5/33	2.2
May	14.3	71	85	59	2.73	9	13.85	1876	Nil	1846	5.62	9/79	3.1
June	12.1	72	84	54	2.78	8	25.49	1967	Nil	1847	11.12	12/67	3.0
July	11.1	70	88	53	2.17	7	9.10	1965	Nil	(c)	7.60	20/65	3.1
August	11.7	67	80	53	1.86	7	14.67	1879	Nil	(d)	4.89	12/87	3.6
September	13.8	63	76	47	1.93	8	5.43	1886	0.03	1907	3.13	12/65	2.6
October	16.0	60	72	48	2.79	9	11.41	1949	0.10	1948	5.34	25/49	1.2
November	18.1	60	72	45	3.70	10	12.40	1917	Nil	1842	5.61	8/66	0.5
December	20.1	61	70	51	5.14	12	17.36	1942	0.35	1865	6.60	28/71	0.4
Year { Totals	..	..	..	..	44.87	123	..	..	..	..	..	..	22.0
Year { Averages	16.6	67	..	..	..	..	..	..	..	..	..	..	..
Year { Extremes	..	..	88	45	..	..	40.39	..	Nil	(e)	18.31	..	..
2/1893													
21/1/1887													

(a) All records up to and including 1950. (b) Records incomplete for various years between 1846 and 1859. (c) 1841 and 1951. (d) 1862, 1869, and 1880. (e) Various months in various years. Figures such as 23/47, 4/93, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates in italics relate to nineteenth century.

## CLIMATOLOGICAL DATA: SYDNEY, NEW SOUTH WALES

(Lat. 33° 52' S., Long. 151° 12' E. Height above M.S.L. 138 ft)

## BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	Bar. corrected to 32° F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m.bars)	Wind (height of anemometer 58 ft)				Mean amt evaporation (in)		No. days thunder	Mean amt clouds 9 a.m., 3 p.m., 9 p.m. (a)		No. clear days
		Average miles per hour	Highest mean speed in one day (mph)	Highest gust speed (mph)	Prevailing direction	9 a.m.	3 p.m.				
No. of years of observations	61	25(b)	25(b)	25(b)	25(b)	25(b)	86	51	109	60	
January	1,012.7	7.6	18.8	10/49	93	NE	NE	5.32	3.4	4.7	5.0
February	1,014.0	7.2	18.8	18/57	63	NE	ENE	4.20	2.6	4.8	4.7
March	1,016.4	6.5	20.7	10/44	58	WNW	ENE	3.65	1.7	4.4	5.8
April	1,018.2	6.3	22.5	24/44	72	W	ENE	2.71	1.4	4.1	7.3
May	1,018.6	6.5	21.0	18/55	63	W	ENE	1.93	1.0	3.9	7.8
June	1,018.8	7.2	22.4	10/47	84	W	WSW	1.49	0.8	4.0	8.1
July	1,018.5	7.1	21.3	20/51	66	W	WSW	1.56	0.8	3.5	10.6
August	1,017.9	7.5	24.6	9/51	68	WNW	WNW	2.02	1.5	3.3	10.5
September	1,017.0	7.2	21.8	23/42	70	WNW	NE	2.75	1.9	3.5	9.0
October	1,015.1	7.6	24.5	1/57	95	WNW	ENE	3.91	2.8	4.1	6.5
November	1,013.4	7.7	19.8	21/54	71	WNW	ENE	4.70	3.7	4.5	5.4
December	1,012.0	7.6	22.5	11/52	75	NE	ENE	5.38	4.0	4.6	4.9
Year { Totals	..	..	..	..	..	..	39.62	25.6	..	85.6	..
Year { Averages	1,016.1	7.2	..	..	WNW	ENE	..	..	4.2	..	..
Year { Extremes	..	..	24.6	..	95	..	..	..	..	..	..

9/8/51

(a) Scale 0-8. (b) Years 1938-1962 inclusive.

## TEMPERATURE AND SUNSHINE

Month	Mean temperature (° Fahr.)			Extreme shade temperature (° Fahr.)		Extreme temperature (° Fahr.)		Mean daily hours sun- shine				
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass					
No. of years of observations	112	112	112	112	112	84(a)	112	50				
January	78.2	65.0	71.6	113.6	14/39	51.1	18/49	164.3	26/15	43.7	6/25	7.2
February	77.8	65.2	71.5	107.8	8/26	49.3	28/63	168.3	14/39	42.8	22/33	6.8
March	76.1	63.2	69.6	102.6	3/69	48.8	14/86	158.3	10/26	39.9	17/13	6.3
April	71.8	58.1	64.9	91.4	(b)	44.6	27/64	144.1	10/77	33.3	24/09	6.1
May	66.2	52.2	59.2	86.0	1/19	40.0	30/62	129.7	1/96	29.3	25/17	5.8
June	61.8	48.4	55.1	80.4	11/31	35.7	22/32	125.5	2/23	28.0	22/32	5.2
July	60.5	46.1	53.3	78.3	22/26	35.9	12/90	124.7	19/77	24.0	4/93	6.1
August	63.3	47.7	55.5	86.8	24/54	36.8	3/72	149.0	30/78	26.1	4/09	6.8
September	67.4	51.4	59.3	94.2	26/65	40.8	2/45	142.2	12/78	30.1	17/05	7.1
October	71.4	55.9	63.7	99.4	4/42	42.2	6/27	152.2	20/33	32.7	9/05	7.3
November	74.3	59.6	67.0	104.5	6/46	45.8	1/05	158.5	28/99	35.4	21/67	7.6
December	76.9	62.9	69.9	108.0	20/57	48.4	3/24	164.5	27/89	41.4	3/24	7.4
Year { Averages	70.5	56.4	63.4	..	..	..	..	..	..	..	..	6.6
Year { Extremes	..	..	..	113.6	..	35.7	..	168.3	..	24.0	..	..
					14/1/39		22/6/32		14/2/39		4/7/1893	

14/1/39

22/6/32

14/2/39

4/7/1893

(a) Records discontinued 1946. (b) 1/36 and 10/69.

## HUMIDITY, RAINFALL, AND FOG

Month	Vapour pres- sure mean 9 a.m. (m.bars)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)				Fog Mean No. days				
		Mean	Highest mean	Lowest mean	Mean mthly	Mean No. of days of rain	Greatest monthly	Least monthly		Greatest in one day			
No. of years of observa- tions	95	95	95	95	112	112	112	112	50				
January	18.7	68	78	58	3.73	13	15.26	1911	0.25	1932	7.08	13/11	0.3
February	19.3	70	81	60	4.41	13	22.22	1956	0.12	1939	8.90	25/73	0.7
March	18.5	74	85	62	5.02	14	20.52	1942	0.33	1965	11.05	28/42	1.6
April	15.0	74	87	63	5.03	13	24.49	1861	0.06	1868	7.52	29/60	2.2
May	12.1	76	90	63	4.89	13	23.03	1919	0.14	1957	8.36	28/89	3.3
June	10.3	76	89	63	5.18	12	25.30	1950	0.16	1962	5.17	16/84	2.6
July	9.3	74	88	59	4.22	11	13.23	1950	0.07	1970	7.80	7/31	2.2
August	9.5	68	84	54	3.17	11	14.89	1899	0.04	1885	5.33	2/60	1.8
September	11.3	66	79	49	2.77	11	14.05	1879	0.08	1882	5.69	10/79	1.0
October	12.9	62	77	46	2.94	12	11.13	(a)	0.21	1867	6.37	13/02	0.6
November	15.0	62	79	42	3.09	12	20.36	1961	0.07	1915	5.24	27/55	0.5
December	17.0	64	77	51	3.16	12	15.82	1920	0.23	1913	4.75	13/10	0.4
Year { Totals	..	..	..	..	47.61	147	..	..	..	..	..	..	17.2
Year { Averages	14.1	69	..	..	..	..	..	..	..	..	..	..	..
Year { Extremes	..	..	90	42	..	..	25.30	..	0.04	11.05	..	..	..
							6/1950		8/1885		28/3/42		

6/1950

8/1885

28/3/42

(a) 1916 and 1959.

Figures such as 10/49, 28/63, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates in italics relate to nineteenth century.



CLIMATOLOGICAL DATA: CANBERRA, AUSTRALIAN CAPITAL TERRITORY  
(Lat. 35° 19' S., Long. 149° 11' E. Height above M.S.L. 1,872 ft)  
BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	Bar. corrected to 32° F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m.bars)	Wind (height of anemometer 33 ft)				Mean amt evapo- ration (in)		No. days thun- der	Mean amt clouds 9 a.m., 3 p.m., 9 p.m. (a)		No. clear days
		Average miles per hour	Highest mean speed in one day (mph)	High- est gust speed (mph)	Prevailing direction 9 a.m. 3 p.m.						
No. of years of obser- vations . . . . .	32	41(b)	41(b)	32(c)	32(c)	32(c)	38(d)	32	32	32(e)	
January . . . . .	1,012.1	4.1	14.9	23/33	65	NW	7.77	3.4	4.1	7.9	
February . . . . .	1,012.9	3.8	15.3	24/33	65	NW	6.12	2.9	4.3	6.8	
March . . . . .	1,016.1	3.3	18.2	28/42	69	SE	5.13	1.6	4.2	8.0	
April . . . . .	1,018.8	3.1	18.6	8/45	66	NW	3.14	0.9	4.1	7.2	
May . . . . .	1,018.7	2.8	13.2	27/58	65	NW	1.89	0.4	4.5	6.7	
June . . . . .	1,020.9	3.0	16.1	2/30	60	NW	1.24	0.2	4.6	6.7	
July . . . . .	1,020.3	3.1	23.4	7/31	63	NW	1.23	0.1	4.4	7.3	
August . . . . .	1,018.7	3.7	15.7	25/36	70	NW	1.75	0.7	4.3	6.9	
September . . . . .	1,017.2	3.7	17.4	28/34	62	NW	2.78	1.2	4.1	8.0	
October . . . . .	1,014.9	4.1	14.7	12/57	74	NW	4.26	2.1	4.3	6.3	
November . . . . .	1,011.9	4.3	17.2	28/42	79	NW	5.71	3.3	4.4	5.9	
December . . . . .	1,010.5	4.3	16.1	11/38	66	NW	7.22	3.6	4.1	7.4	
Year { Totals . . . . .	..	..	..	..	..	..	48.24	20.3	..	85.2	
Year { Averages . . . . .	1,016.1	3.6	..	..	NW	NW	..	..	4.3	7.1	
Year { Extremes . . . . .	..	..	23.4	7/7/31	79	..	..	..	..	..	

(a) Scale 0-8. (b) Recorded at Forestry and Timber Bureau, Yarralumla, where a cup anemometer is installed. (c) Recorded at Meteorological Office, R.A.A.F. Fairbairn, where a Dines Pressure Tube anemometer is installed. (d) Australian tank, Yarralumla, 1929-66. (e) 1940-71. Formerly assessed over 37-year period at Yarralumla.

TEMPERATURE AND SUNSHINE

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme temperature (°Fahr.)		Mean daily hours sun- shine
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass	
No. of years of observations	32	32	32	32	32	..	20	34
January . . . . .	81.8	55.0	68.4	(a) 106.6	31/68	35.3	1/56	9.0
February . . . . .	79.9	54.6	67.3	108.0	1/68	37.4	16/62	8.3
March . . . . .	75.9	50.8	63.3	97.6	9/40	30.1	24/67	7.5
April . . . . .	67.3	43.7	55.5	90.7	12/68	27.0	24/69	6.9
May . . . . .	58.5	36.9	47.7	76.1	10/67	18.8	16/57	5.5
June . . . . .	53.6	33.6	43.6	68.2	3/57	16.7	8/57	4.7
July . . . . .	51.7	31.4	41.6	61.4	(c)	14.0	11/71	5.1
August . . . . .	54.6	33.3	43.9	71.0	24/54	18.1	11/69	6.1
September . . . . .	60.3	36.8	48.5	83.4	26/65	22.0	5/40	7.5
October . . . . .	66.3	42.2	54.3	90.8	13/46	26.0	4/57	8.0
November . . . . .	72.0	46.7	59.3	101.8	19/44	28.8	28/67	8.8
December . . . . .	78.2	51.8	65.0	101.9	21/53	34.0	18/64	8.9
Year { Averages . . . . .	66.7	43.1	54.9	..	..	..	..	7.2
Year { Extremes . . . . .	..	..	..	108.0	14.0	..	4.9	..
				1/2/68	11/7/71	..	11/7/71	..

(a) A temperature of 109.0 was recorded at the former Acton station on 11.1.39. (b) 30/58 and 24/67. (c) 2/46 and 9/54.

HUMIDITY, RAINFALL, AND FOG

Month	Vapour pres- sure mean 9 a.m. (m.bars)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)				Fog Mean No. days
		Mean	Highest mean	Lowest mean	Mean No. of days mthly	Greatest monthly	Least monthly	Greatest in one day	
No. of years of observa- tions . . . . .	32(a)	32	32	32	32	32	32	32	32
January . . . . .	13.3	59	75	42	2.34	8	6.46	1941	0.6
February . . . . .	13.9	65	81	53	2.16	7	5.70	1948	0.9
March . . . . .	12.6	67	81	53	2.07	7	12.29	1950	1.7
April . . . . .	10.4	73	84	38	1.93	7	6.06	1940	2.7
May . . . . .	8.4	83	96	73	2.05	9	5.89	1953	7.0
June . . . . .	7.2	83	97	73	1.54	9	4.96	1956	7.1
July . . . . .	6.6	84	93	68	1.47	10	4.07	1960	7.0
August . . . . .	7.0	78	92	58	1.70	12	4.18	1955	4.0
September . . . . .	8.2	71	82	55	1.95	10	4.55	1970	2.7
October . . . . .	9.7	66	82	50	2.71	11	5.81	1959	1.8
November . . . . .	10.4	56	76	38	2.47	9	5.31	1961	0.6
December . . . . .	11.9	57	74	43	2.38	8	8.47	1947	0.1
Year { Totals . . . . .	..	..	..	..	24.77	107	..	..	36.2
Year { Averages . . . . .	9.9	70	..	..	..	..	..	..	..
Year { Extremes . . . . .	..	..	97	38	..	12.29	3/50	Nil (b)	..
								4.13	21/10/59

(a) Formerly assessed over 38-year period at Forestry and Timber Bureau, Yarralumla. (b) 12/67 and 2/68.  
Data shown in the above tables relate to the Meteorological Office, R.A.A.F., Fairbairn, except where otherwise indicated, and cover years up to 1971. Figures such as 23/53, 31/68, etc. indicate, in respect of the month of reference, the day and year of the occurrence.

## CLIMATOLOGICAL DATA: MELBOURNE, VICTORIA

(Lat. 37° 49' S., Long. 144° 58' E. Height above M.S.L. 114 ft)

## BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	No. of years of obser- vations	Bar. corrected to 32° F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m.bars)	Wind (height of anemometer 93 ft)				Mean amt evapo- ration (in)	No. days thunder	Mean amt clouds		No. clear days	
			Average miles per hour	Highest mean speed in one day (mph)	High- est gust speed (mph)	Prevailing direction			9 a.m., 3 p.m., (a)	No. clear days		
						9 a.m.						3 p.m.
January	115	31(b)	58	61	52	52	94(c)	63	114	63		
February	1,012.8	8.3	21.1 27/41	66	S	S	6.49	1.7	4.1	6.7		
March	1,014.3	8.1	19.0 13/47	74	S & SW	S	5.08	2.0	4.0	6.0		
April	1,016.8	7.3	18.0 3/61	66	N	S	4.12	1.3	4.4	5.4		
May	1,019.0	7.0	19.9 16/43	67	N	S	2.50	0.7	4.8	4.2		
June	1,019.1	7.3	20.5 4/61	72	N	N & S	1.55	0.4	5.2	3.0		
July	1,018.9	7.3	22.8 16/47	64	N	N	1.15	0.2	5.3	2.8		
August	1,018.6	8.0	22.7 22/60	68	N	N	1.13	0.2	5.1	2.5		
September	1,017.7	7.8	21.3 20/42	65	N	N & S	1.52	0.6	5.0	2.8		
October	1,016.0	8.0	21.1 15/64	69	N	S	2.36	0.8	4.8	3.6		
November	1,014.7	8.1	18.9 6/68	69	N	S	3.40	1.6	4.8	3.5		
December	1,013.9	8.5	21.2 13/58	71	SW	S	4.52	2.0	4.9	3.2		
	1,012.4	8.4	21.0 12/52	61	S & SW	S	5.78	2.2	4.5	4.4		
Year { Totals	1,016.2	7.8	.. ..	..	..	..	39.60	13.7	..	48.1		
Averages	1,016.2	7.8	.. ..	..	..	N	S	..	..	4.7		
Extremes	..	..	22.8	74	..	..	..	..	..	..		
			16/6/47									

(a) Scale 0-8.

(b) Early records not comparable.

(c) Records to 1966.

## TEMPERATURE AND SUNSHINE

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme temperature (°Fahr.)		Mean daily hours sun- shine
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass	
No. of years of observations	115	115	115	115	115	86(a)	111	52(c)
January	78.4	56.9	67.7	114.1	13/39	42.0	28/85	8.1
February	78.1	57.4	67.8	109.5	7/01	40.2	24/24	7.5
March	74.8	55.0	64.9	107.0	11/40	37.1	17/84	6.6
April	68.1	50.8	59.4	94.8	5/38	34.8	24/88	5.1
May	61.6	46.9	54.3	83.7	10/05	29.9	29/16	3.9
June	57.0	44.0	50.5	72.3	2/57	28.0	11/66	3.4
July	55.8	42.2	49.0	69.3	22/26	27.0	21/69	3.7
August	58.6	43.4	51.0	77.0	20/85	28.3	11/63	4.6
September	62.8	45.6	54.2	88.6	28/28	31.0	3/40	5.5
October	67.1	48.5	57.8	98.4	24/14	32.1	3/71	5.9
November	71.3	51.4	61.4	105.7	27/94	36.5	2/96	6.5
December	75.4	54.5	65.0	110.7	15/76	40.0	4/70	7.3
Year { Averages	67.4	49.7	58.6	114.1	..	27.0	..	5.7
Extremes	..	..	..	114.1	13/1/39	27.0	21/7/1869	..
							14/1/1862	30/6/29

(a) Records discontinued 1946.

(b) 17/1884 and 20/1897.

(c) Instrument moved from Melbourne to Laverton in 1967.

## HUMIDITY, RAINFALL, AND FOG

Month	No. of years of observations	Vapour pressure mean 9 a.m. (m.bars)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)					Fog Mean No. days		
			Mean	Highest mean	Lowest mean	Mean mthly	Mean No. of days of rain	Greatest monthly	Least monthly	Greatest in one day			
January	63	63	63	63	115	115	6.92	1963	0.01	1932	4.25	29/63	113
February	13.0	60	68	50	1.87	8	7.72	1939	0.02	1965	3.44	26/46	0.1
March	14.1	63	77	48	1.85	7	7.50	1911	0.14	1934	3.55	5/19	0.8
April	13.3	66	79	50	2.12	9	7.67	1960	Nil	1923	3.15	23/60	1.8
May	11.7	72	82	66	2.33	11	7.67	1960	Nil	1923	3.15	23/60	1.8
June	10.3	79	88	70	2.25	14	5.60	1942	0.14	1934	1.81	18/00	3.7
July	9.3	83	92	73	1.98	14	4.50	1859	0.31	1858	1.71	21/04	4.7
August	8.9	81	86	75	1.92	15	7.02	1891	0.57	1902	2.93	12/91	4.4
September	9.1	75	82	65	1.95	15	4.35	1939	0.48	1903	2.14	17/81	2.4
October	9.5	68	76	60	2.31	14	7.93	1916	0.52	1907	2.31	23/16	0.9
November	10.5	63	71	52	2.64	14	7.61	1869	0.29	1914	2.40	21/53	0.4
December	11.3	60	69	52	2.31	12	8.11	1954	0.25	1895	2.86	21/54	0.2
	12.5	59	69	48	2.30	10	7.18	1863	0.11	1904	3.92	4/54	0.2
Totals	..	..	..	..	25.83	143	..	..	..	..	..	..	19.9
Averages	11.1	69	..	..	..	..	..	..	..	..	..	..	..
Extremes	..	..	92	48	..	..	8.11	11/1954	Nil	4/1923	4.25	29/1/63	..

Figures such as 27/41, 28/85, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates in italics relate to nineteenth century.

CLIMATOLOGICAL DATA: HOBART, TASMANIA

(Lat. 42° 53' S., Long. 147° 20' E. Height above M.S.L. 177 ft)

BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	Bar. corrected to 32° F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m.bars)	Wind (height of anemometer 40 ft)				Mean amt evaporation (in)	No. days thunder	Mean amt clouds		No. clear days
		Average miles per hour	Highest mean speed in one day (mph)	Highest gust speed (mph)	Prevailing direction			9 a.m., 3 p.m., 9 p.m. (a)		
					9 a.m.				3 p.m.	
No. of years of observations	85	60	60	80	30(b)	30(b)	56(c)	59	85	30(b)
January	1,010.5	7.8	20.8	30/16	81	NNW	SSE	4.91	1.0	5.0
February	1,012.8	7.1	25.2	4/27	75	NNW	SSE	3.74	1.0	4.9
March	1,014.3	6.8	21.4	13/38	79	NW	SSE	3.20	0.7	4.8
April	1,015.4	6.8	24.1	9/52	74	NW	W	2.06	0.4	5.0
May	1,015.4	6.5	22.0	21/65	84	NNW	NW	1.38	Nil	5.0
June	1,015.1	6.3	23.7	27/20	82	NW	NW	0.93	0.1	5.0
July	1,014.1	6.6	22.9	22/53	80	NNW	NNW	0.93	Nil	4.8
August	1,012.9	6.8	25.5	19/26	87	NNW	NW	1.29	0.1	4.9
September	1,011.4	7.8	26.7	28/65	93	NNW	NW	2.00	0.1	4.9
October	1,010.3	7.8	20.2	3/65	87	NWN	SW	2.94	0.4	5.2
November	1,009.8	8.0	21.2	18/15	84	NNW	S	3.75	0.6	5.2
December	1,009.4	7.7	23.4	1/34	76	NNW	SSE	4.40	0.8	5.3
Totals	1,012.6	7.2	26.7	28/9/65	93	NNW	W	31.53	5.2	22.1
Averages	1,012.6	7.2	26.7	28/9/65	93	NNW	W	31.53	5.2	22.1
Extremes	1,012.6	7.2	26.7	28/9/65	93	NNW	W	31.53	5.2	22.1

(a) Scale 0-8. (b) Standard thirty years normal (1911-1940). (c) 1910-1965.

TEMPERATURE AND SUNSHINE

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme temperature (°Fahr.)		Mean daily hours sun- shine
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass	
No. of years of observations	87	87	87	87	87	57(a)	87	75
January	70.5	52.7	61.5	105.0	40.1 (b)	160.0 (d)	30.6 19/97	7.5
February	70.6	53.0	61.8	104.4 12/99	39.0 20/87	165.0 24/98	28.3 —/87	6.7
March	67.9	50.9	59.3	99.1 13/40	35.2 31/26	150.9 26/44	27.5 30/02	6.2
April	62.6	47.6	55.1	87.1 1/41	33.2 14/63	142.0 18/93	25.0 —/86	4.8
May	57.5	44.0	50.7	77.8 5/21	29.2 20/02	128.0 (e)	20.0 19/02	4.2
June	53.1	41.2	47.1	69.2 1/07	29.2 28/44	122.0 12/94	18.1 24/63	3.7
July	52.5	40.0	46.2	66.1 14/34	27.7 11/95	121.0 12/93	18.7 16/86	4.2
August	55.1	41.1	48.1	71.6 28/14	28.8 5/62	129.9 —/87	20.1 7/09	4.8
September	58.8	43.0	50.9	81.7 23/26	31.0 16/97	138.0 23/93	18.3 16/26	5.5
October	62.3	45.5	53.9	92.0 24/14	32.0 12/89	156.0 9/93	23.8 (f)	5.9
November	65.3	48.1	56.7	98.3 26/37	35.0 16/41	154.0 19/92	26.0 1/08	6.8
December	68.3	50.9	59.6	105.2 30/97	38.0 3/06	161.5 10/39	27.2 —/86	6.9
Year { Averages	62.0	46.5	54.2	105.2	27.7	165.0	18.1	5.6
Year { Extremes				30/12/1897	11/7/1895	24/2/1868	24/6/63	

(a) Period 1934-1938 not comparable; records discontinued 1946. (b) 1/1900 and 19/1959. (c) 9/1937 and 11/1937. (d) 5/1886 and 13/1905. (e) —/1899 and —/1893. (f) 1/1886 and 1/1899.

HUMIDITY, RAINFALL, AND FOG

Month	Vapour pres- sure mean 9 a.m. (m.bars)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)				Fog Mean No. days	
		Mean	Highest mean	Lowest mean	Mean mthly	No. of days of rain	Greatest monthly	Least monthly		Greatest in one day
No. of years of observa- tions . . . . .	77	77	77	77	88	88	88	88	88	47(a)
January . . . . .	11.0	58	81	45	1.91	11	5.91	0.17	88	0.1
February . . . . .	11.7	62	83	49	1.62	10	9.15	0.11	1914	0.0
March . . . . .	11.0	65	78	52	1.85	11	10.05	0.29	1943	0.3
April . . . . .	10.0	70	84	57	2.16	12	9.75	0.07	1904	0.2
May . . . . .	8.8	75	86	61	1.92	14	8.43	0.14	1913	0.6
June . . . . .	7.9	78	91	61	2.34	15	9.38	0.28	1886	1.1
July . . . . .	7.6	78	87	72	2.09	15	6.12	0.17	1950	0.8
August . . . . .	7.9	73	86	59	1.93	16	10.16	0.30	1892	0.5
September . . . . .	8.3	66	81	52	2.05	15	7.93	0.38	1951	0.3
October . . . . .	9.1	62	74	52	2.51	17	7.60	0.39	1914	0.1
November . . . . .	9.6	58	73	49	2.19	14	8.94	0.33	1921	0.1
December . . . . .	10.6	58	73	42	2.27	13	9.00	0.17	1931	0.4
Year { Totals . . . . .	9.5	67	91	42	24.84	163	10.16	0.07	6.15	4.5
Year { Averages . . . . .	9.5	67	91	42	24.84	163	10.16	0.07	6.15	4.5
Year { Extremes . . . . .	9.5	67	91	42	24.84	163	10.16	0.07	6.15	4.5
1/1858 4/1904 15/9/57										

(a) 1922-1968. (b) 1915 and 1958.

Figures such as 30/16, 12/99, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates in italics relate to nineteenth century.



**Rainfall and temperatures, various cities**

Year Book No. 34, page 28, shows rainfall and temperature, and No. 38, page 42, temperature, for various important cities throughout the world and for the Australian capitals.

**Climatological data for selected Australian country towns**

The following table shows some of the more important climatological data for selected Australian country towns, based on standard thirty years normals (1911–1940).

**CLIMATOLOGICAL DATA FOR SELECTED AUSTRALIAN COUNTRY TOWNS**

Town	Rainfall		Temperature				Relative humidity			
							Average index of mean relative humidity(a), January	Average index of mean relative humidity(a), July	Mean 3 p.m., January (%)	Mean 3 p.m., July (%)
	Average annual rainfall (inches)	Average number of wet days	Mean maximum, January (°F.)	Mean maximum, July (°F.)	Mean minimum, January (°F.)	Mean minimum, July (°F.)				
WESTERN AUSTRALIA										
Albany . . .	39.67	172	73.8	69.9	58.5	46.3	73	76	65	70
Broome . . .	22.87	38	91.3	81.8	79.2	57.0	75	52	67	43
Bunbury . . .	33.22	125	82.1	62.5	59.1	47.1	66	78	57	71
Carnarvon . . .	9.01	35	87.2	71.7	72.1	51.6	64	66	61	57
Esperance . . .	26.73	124	76.6	62.1	59.9	45.4	70	77	63	65
Geraldton . . .	18.58	80	84.5	67.7	66.3	51.7	61	68	60	60
Kalgoorlie . . .	9.46	62	93.2	62.5	64.2	42.9	43	66	27	50
Meekatharra . . .	9.17	36	100.4	67.5	73.1	44.0	31	59	21	44
Narrogin . . .	21.38	108	87.3	57.9	56.3	41.3	..	..	..	..
Port Hedland . . .	11.01	20	94.3	79.3	79.4	55.6	67	49	63	47
Wyndham . . .	25.15	55	95.9	85.0	80.2	66.2	66	38	54	35
NORTHERN TERRITORY										
Alice Springs . . .	9.93	31	95.3	66.9	69.8	38.9	33	49	26	32
Tennant Creek . . .	13.85	30	98.5	75.4	75.9	51.1	41	36	27	25
SOUTH AUSTRALIA										
Ceduna . . .	10.50	68	81.5	62.6	58.8	43.8	..	..	..	..
Mount Gambier . . .	26.86	192	74.2	56.2	53.5	42.4	65	79	50	69
Oodnadatta . . .	4.44	20	99.0	66.4	72.1	42.7	27	49	17	34
Port Augusta . . .	9.28	62	89.5	62.8	65.3	43.9	50	66	33	52
Port Lincoln . . .	18.24	119	77.4	60.2	58.5	46.4	64	76	53	70
Port Pirie . . .	12.99	78	89.2	61.7	62.6	45.4	51	72	..	..
QUEENSLAND										
Atherton . . .	53.99	116	83.8	70.9	65.0	50.0	78	79	..	..
Bundaberg . . .	42.37	84	86.1	71.6	69.7	49.2	74	72	63	55
Cairns . . .	86.35	140	89.7	78.1	74.2	61.0	77	74	69	63
Charleville . . .	17.97	49	97.6	68.3	70.8	40.1	44	61	28	39
Charters Towers . . .	23.26	59	92.9	76.0	71.3	51.6	65	64	46	47
Cloncurry . . .	16.89	35	98.7	76.4	76.5	51.5	40	40	30	27
Ipswich . . .	28.97	76	90.4	70.0	67.8	43.8	65	65	..	..
Longreach . . .	15.54	37	99.6	73.2	73.3	44.3	49	56	29	35
Mackay . . .	63.16	116	86.2	71.0	73.6	53.4	80	77	..	..
Maryborough . . .	45.43	122	87.9	71.5	68.8	47.6	73	74	..	..
Normanton . . .	37.56	56	94.3	84.0	77.0	58.6	70	48	52	34
Rockhampton . . .	37.36	93	90.0	73.7	72.3	51.2	68	65	55	45
Roma . . .	20.43	52	94.4	67.4	68.3	39.3	51	64	32	40
Toowoomba . . .	35.19	105	82.7	61.1	61.2	40.7	73	79	..	..
Townsville . . .	43.06	75	87.3	76.0	76.2	59.8	75	64	69	59

For footnotes see next page.

CLIMATOLOGICAL DATA FOR SELECTED AUSTRALIAN COUNTRY TOWNS—*continued*

Town	Rainfall		Temperature				Relative humidity			
							Average index of mean relative humidity(a), January	Average index of mean relative humidity(a), July	Mean 3 p.m., January (%)	Mean 3 p.m., July (%)
	Average annual rainfall (inches)	Average number of wet days	Mean maximum, January (°F.)	Mean maximum, July (°F.)	Mean minimum, January (°F.)	Mean minimum, July (°F.)				
NEW SOUTH WALES										
Albury . . . . .	27.66	99	89.9	56.4	59.8	38.2	47	74	29	64
Armidale . . . . .	28.98	107	80.8	54.0	56.5	33.8	60	61	44	57
Bega . . . . .	35.92	80	81.2	62.9	57.3	34.5	72	70	..	..
Bourke . . . . .	11.74	44	98.0	63.8	69.3	40.8	37	64	24	48
Broken Hill . . . . .	9.20	46	90.5	59.5	64.5	41.2	36	67	24	49
Cooma . . . . .	18.85	88	78.8	50.4	52.2	30.2	55	67	38	56
Dubbo . . . . .	20.91	72	92.1	59.7	63.8	37.5	48	74	32	56
Goulburn . . . . .	24.27	112	81.5	52.4	56.2	35.8	59	74	43	67
Grafton . . . . .	34.68	105	89.1	70.6	67.2	43.9	..	..	..	..
Katoomba . . . . .	53.17	126	73.9	48.4	54.6	36.7	61	71	54	68
Leeton . . . . .	15.76	78	88.9	56.8	63.2	38.9	44	76	..	..
Moree . . . . .	21.43	56	96.0	64.8	67.4	39.0	..	..	..	..
Newcastle . . . . .	41.36	132	77.7	61.4	66.6	47.7	74	70	69	61
Orange . . . . .	31.52	95	83.9	51.6	53.7	31.4	..	..	..	..
Tamworth . . . . .	24.41	67	91.0	60.4	63.4	36.8	..	..	..	..
Taree . . . . .	47.48	110	83.9	64.5	62.0	42.7	..	..	..	..
Wagga . . . . .	21.42	86	89.8	57.1	61.5	37.8	50	77	31	65
Wollongong . . . . .	44.04	112	78.4	61.7	62.6	47.1	78	71	..	..
VICTORIA										
Ballarat . . . . .	27.38	170	75.7	49.8	50.5	38.4	60	81	41	75
Bendigo . . . . .	20.27	111	83.0	54.2	56.5	39.4	47	75	30	64
Geelong . . . . .	21.32	133	76.2	56.5	55.4	42.0	65	81	52	70
Horsham . . . . .	17.57	104	85.1	56.0	55.2	38.8	50	77	33	67
Mildura . . . . .	10.37	61	89.8	59.5	61.0	40.5	48	71	..	..
Sale . . . . .	23.70	128	77.5	56.8	54.4	38.6	65	79	51	68
Seymour . . . . .	22.17	94	84.7	55.2	54.6	37.4	56	79	..	..
Shepparton . . . . .	19.94	103	86.3	55.7	58.8	39.3	49	77	32	63
Wangaratta . . . . .	25.57	104	86.7	55.2	58.5	38.1	41	75	26	66
Warrnambool . . . . .	25.79	153	69.9	55.6	54.7	43.6	73	83	69	77
TASMANIA										
Burnie . . . . .	38.90	170	67.6	53.7	51.9	41.7	70	82	65	74
Launceston . . . . .	28.56	149	75.8	53.7	52.1	36.9	60	77	..	..
Zeehan . . . . .	94.06	246	66.3	51.6	48.0	38.2	73	81	61	74

(a) The average index of mean relative humidity has been derived from the ratio of the average 9 a.m. vapour pressure to the saturation vapour pressure at the average mean temperature of the month. Being thus related to the mean temperature this value of relative humidity is a good approximation to the daily mean.

NOTE. The table on the next page gives the latitude, longitude, and altitude of the weather recording station at each of the above towns.

## LOCATION CO-ORDINATES FOR SELECTED AUSTRALIAN COUNTRY TOWNS

Station	Lat.	Long.	Altitude (ft)	Station	Lat.	Long.	Altitude (ft)
Western Australia—				Queensland— <i>contd</i>			
Albany . . . . .	34° 57'	117° 48'	226	Toowoomba . . . . .	27° 33'	151° 57'	1,921
Broome . . . . .	17° 57'	122° 13'	39	Townsville . . . . .	19° 15'	146° 46'	10
Bunbury . . . . .	33° 19'	115° 38'	3	New South Wales—			
Carnarvon . . . . .	24° 53'	113° 39'	12	Albury . . . . .	36° 06'	146° 54'	600
Esperance . . . . .	33° 51'	121° 53'	14	Armidale . . . . .	30° 32'	151° 38'	3,215
Geraldton . . . . .	28° 48'	114° 42'	92	Bega . . . . .	36° 40'	149° 50'	50
Kalgoorlie . . . . .	30° 46'	121° 27'	1,180	Bourke . . . . .	30° 05'	145° 58'	350
Meekatharra . . . . .	26° 36'	118° 29'	1,697	Broken Hill . . . . .	31° 57'	141° 28'	978
Narrogin . . . . .	32° 54'	117° 09'	1,150	Cooma . . . . .	36° 13'	149° 08'	2,749
Port Hedland . . . . .	20° 23'	118° 37'	20	Dubbo . . . . .	32° 10'	148° 37'	861
Wyndham . . . . .	15° 31'	128° 09'	20	Goulburn . . . . .	34° 45'	149° 43'	2,074
Northern Territory—				Grafton . . . . .	29° 41'	152° 56'	21
Alice Springs . . . . .	23° 48'	133° 53'	1,790	Katoomba . . . . .	33° 43'	150° 19'	3,280
Tennant Creek . . . . .	19° 38'	134° 11'	1,229	Leeton . . . . .	34° 33'	146° 24'	496
South Australia—				Moree . . . . .	29° 28'	149° 51'	680
Ceduna . . . . .	32° 08'	133° 42'	57	Newcastle . . . . .	32° 55'	151° 49'	122
Mount Gambier . . . . .	37° 45'	140° 47'	206	Orange . . . . .	33° 18'	149° 06'	2,850
Oodnadatta . . . . .	27° 33'	135° 29'	371	Tamworth . . . . .	31° 05'	150° 56'	1,279
Port Augusta . . . . .	32° 33'	137° 47'	14	Taree . . . . .	31° 54'	152° 28'	30
Port Lincoln . . . . .	34° 47'	135° 53'	13	Wagga . . . . .	35° 08'	147° 25'	719
Port Pirie . . . . .	33° 11'	138° 01'	10	Wollongong . . . . .	34° 25'	150° 56'	150
Queensland—				Victoria—			
Atherton . . . . .	17° 17'	145° 27'	2,466	Ballarat . . . . .	37° 35'	143° 50'	1,433
Bundaberg . . . . .	24° 52'	152° 21'	6	Bendigo . . . . .	36° 46'	144° 17'	730
Cairns . . . . .	16° 35'	145° 44'	10	Geelong . . . . .	38° 07'	144° 22'	57
Charleville . . . . .	26° 25'	146° 17'	950	Horsham . . . . .	36° 40'	142° 12'	437
Charters Towers . . . . .	20° 03'	146° 08'	1,004	Mildura . . . . .	34° 14'	142° 05'	156
Cloncurry . . . . .	20° 40'	140° 30'	621	Sale . . . . .	38° 06'	147° 08'	15
Ipswich . . . . .	27° 38'	152° 44'	64	Seymour . . . . .	37° 02'	145° 08'	464
Longreach . . . . .	23° 26'	144° 15'	612	Shepparton . . . . .	36° 23'	145° 24'	372
Mackay . . . . .	21° 07'	149° 10'	9	Wangaratta . . . . .	36° 22'	146° 19'	493
Maryborough . . . . .	25° 32'	152° 42'	20	Warrnambool . . . . .	38° 24'	142° 29'	33
Normanton . . . . .	17° 39'	141° 05'	34	Tasmania—			
Rockhampton . . . . .	23° 23'	150° 29'	26	Burnie . . . . .	41° 04'	145° 54'	13
Roma . . . . .	26° 36'	148° 42'	1,000	Launceston . . . . .	41° 33'	147° 13'	546
				Zeehan . . . . .	41° 54'	145° 23'	592



**The weather of 1971 (December 1970 to November 1971)**

The following is a brief summary of weather conditions experienced during the four seasons ended in November 1971. Plate 4, page 32, shows the rainfall distribution for 1971.

*Summer, 1970-71.*

There were record rains and floods in the eastern areas of the continent from Queensland to Tasmania. Western Queensland, adjacent Northern Territory and northern South Australia had a very dry season.

The dryness of the previous year and less than normal summer rainfall meant that stock in much of the Northern Territory and the western half of Queensland were in poor condition.

Cereal crops in northern New South Wales were saved by the spring rains and in places the summer rains adversely affected the quality of the grain as well as the quantity harvested. Elsewhere the wheat harvest was completed successfully with totals somewhat above quotas. There was a good supply of moisture in the soil of the wheat-growing areas of the eastern States, but this was not the case in South Australia and Western Australia.

Generally conditions were satisfactory or better for horticultural pursuits.

*Autumn, 1971.*

Early in autumn, rains transformed the situation to very favourable. It had previously been drought or near drought, in western Queensland, north-western New South Wales and adjacent South Australia. The continuation of the tropical wet season into autumn produced very favourable conditions in the north. The season was good in Tasmania, Victoria, southern New South Wales and South Australia. In the south of Western Australia autumn was less favourable; there were greater than average rains in March, but they damaged dry feed, and were followed by low rainfall in the succeeding two months deferring the 'break of season' to winter. Conditions were even more severe in eastern New South Wales and south-eastern Queensland with record or near record low rainfall.

Except for wheat-growing areas of Western Australia, northern New South Wales and southern Queensland, autumn ended with a very good record in conditions associated with primary production.

*Winter, 1971.*

In Western Australia, Queensland and New South Wales some areas had well below average rainfall in the early part of winter following dry conditions toward the end of autumn. In all except south-eastern New South Wales and eastern Victoria, late winter rains transformed the situation in the previously dry southern areas and all grain growing areas were in good condition at the end of winter; although there was considerable reliance upon favourable conditions in spring for the success of the harvest.

Stock were in good condition generally at the end of winter.

There were some very cold periods, mainly during mid-winter in the eastern States and frosts were heavier than usual particularly along the Dividing Range.

*Spring, 1971.*

Rainfall was generally above average in the south-west of Western Australia, most of Northern Territory, South Australia, southern Victoria and Tasmania. Elsewhere over the continent spring rainfall was mainly below average, particularly in coastal New South Wales where severe deficiencies were experienced.

Southern Victoria and Tasmania had some excellent spring falls exceeding 140 per cent of normal seasonal rainfall in some areas. On the other hand, most of New South Wales fared badly, coastal areas receiving less than 50 per cent of their normal seasonal rainfall, except for the Northern Rivers area.

Spring temperatures were generally average but the south-west of Western Australia and most of south-east Australia were well below average and central Australia was well above.

## CHAPTER 3

### GENERAL GOVERNMENT

#### Parliamentary government

##### Scheme of parliamentary government

Under section 1 of the Commonwealth of Australia Constitution the legislative power of the Commonwealth is vested in the Parliament of the Commonwealth, which consists of the Sovereign, the Senate, and the House of Representatives. The Sovereign is represented throughout the Commonwealth by the Governor-General who, subject to the Constitution of the Commonwealth, has such powers and functions as the Sovereign is pleased to assign to him. In each State there is a State Governor who is the representative of the Sovereign for the State and who exercises such powers within the State as are conferred upon him by the Letters Patent which constitute his office and by the instructions which detail the manner in which his duties are to be fulfilled. The Legislature in each State was bicameral until 1922, when the Queensland Upper House was abolished and the Parliament became unicameral. In the bicameral Parliaments the Upper House is known in the Commonwealth Parliament as the Senate, and in the State Parliaments as the Legislative Council, while the Lower House is known in the Commonwealth Parliament as the House of Representatives, in the State Parliaments of New South Wales, Victoria, and Western Australia as the Legislative Assembly, and in the State Parliaments of South Australia and Tasmania as the House of Assembly. In Queensland the sole legislative chamber is known as the Legislative Assembly. The extent of the Legislative powers of the Parliaments is defined by the Commonwealth and State Constitutions. In those States that have a bicameral legislature the Legislative Assembly or House of Assembly is the larger House. The members of the Legislative Assembly or House of Assembly, as the case may be, of each State are elected by the people, the franchise extending to British subjects who are at least 21 years of age with certain residential qualifications, except in Western Australia and South Australia where persons have been allowed to vote to elect members in both Houses of the respective Parliaments of those States if they are at least 18 years of age. With the exception of the New South Wales Legislative Council, the members of State Legislative Councils are, in common with members of the Lower Houses, elected by the people of the respective States. In New South Wales a quarter of the members of the Legislative Council retire each three years, and the continuing members of the Council and the members of the Legislative Assembly, voting as an electoral body, elect members to fill the vacant positions. In Victoria, and Tasmania members of the Legislative Council are elected by adult suffrage, while the franchise is limited in South Australia to the holders of certain property or service qualifications and their spouses. In the Commonwealth Parliament the qualifications for the franchise are identical for both Houses, extending to British subjects who have lived in Australia for six months continuously and who are at least 21 years of age.

##### The Sovereign

On 7 February 1952 the Governor-General and members of the Federal Executive Council proclaimed Princess Elizabeth Queen Elizabeth the Second, Queen of this Realm and of all Her other Realms and Territories, Head of the Commonwealth, Defender of the Faith, Supreme Liege Lady in and over the Commonwealth of Australia. The coronation of Her Majesty in Westminster Abbey took place on 2 June 1953.

##### The Governor-General

*Powers and functions.* As the Queen's representative in Australia, the Governor-General exercises certain prerogative powers and functions assigned to him by the Queen. Other powers and functions are conferred on him by the Constitution. Powers which have been so assigned or conferred include, among others, the power to grant pardons and to remit fines for offences against the laws of the Commonwealth; to appoint certain officers in the Diplomatic or Consular Service of the Commonwealth; to appoint times for holding the sessions of the Parliament, prorogue Parliament, and dissolve the House of Representatives; to cause writs to be issued for general elections of members of the House of Representatives; to assent in the Queen's name to a proposed law passed by both Houses of the Parliament or withhold assent, or to reserve the law for the Queen's pleasure, or to return the proposed law to the House in which it originated and transmit therewith any amendments which he

may recommend; to exercise the executive power of the Commonwealth; to choose and summon Executive Councillors, who hold office during his pleasure; and to appoint Ministers of State for the Commonwealth. In addition, the command-in-chief of the defence forces of the Commonwealth is vested in the Governor-General as the Queen's representative.

Many Acts of the Commonwealth Parliament provide that the Governor-General may make regulations to give effect to the Act. The Governor-General may also be authorised by statute to issue proclamations—for example, to declare an Act in force or a state of things to exist, e.g. the calling out of the Citizen Military Forces in time of war or defence emergency. He has been given power by statute to legislate for certain Territories of the Commonwealth. Under the conventions of responsible government obtaining in British Commonwealth countries, the Governor-General's functions are exercised generally on the advice of Ministers of State.

*Holders of office.* The following list shows the names of the Governors-General since the inception of the Commonwealth.

#### GOVERNORS-GENERAL

Rt Hon. JOHN ADRIAN LOUIS, EARL OF HOPETOUN (afterwards MARQUIS OF LINLITHGOW), P.C., K.T., G.C.M.G., G.C.V.O. From 1 January 1901 to 9 January 1903.

Rt Hon. HALLAM, BARON TENNYSON, P.C., G.C.M.G. From 17 July 1902 to 9 January 1903 (Acting).

Rt Hon. HALLAM, BARON TENNYSON, P.C., G.C.M.G. From 9 January 1903 to 21 January 1904.

Rt Hon. HENRY STAFFORD, BARON NORTHCOTE, P.C., G.C.M.G., G.C.I.E., C.B. From 21 January 1904 to 9 September 1908.

Rt Hon. WILLIAM HUMBLE, EARL OF DUDLEY, P.C., G.C.B., G.C.M.G., G.C.V.O. From 9 September 1908 to 31 July 1911.

Rt Hon. THOMAS, BARON DENMAN, P.C., G.C.M.G., K.C.V.O. From 31 July 1911 to 18 May 1914.

Rt Hon. SIR RONALD CRAUFURD MUNRO-FERGUSON (afterwards VISCOUNT NOVAR OF RAITH), G.C.M.G. From 18 May 1914 to 6 October 1920.

Rt Hon. HENRY WILLIAM, BARON FORSTER OF LEPE, P.C., G.C.M.G. From 6 October 1920 to 8 October 1925.

Rt Hon. JOHN LAWRENCE, BARON STONEHAVEN (afterwards 1ST VISCOUNT STONEHAVEN), P.C., G.C.M.G., D.S.O. From 8 October 1925 to 22 January 1931.

Rt Hon. SIR ISAAC ALFRED ISAACS, G.C.B., G.C.M.G., K.C. From 22 January 1931 to 23 January 1936.

Brigadier-General the Rt Hon. ALEXANDER GORE ARKWRIGHT, BARON GOWRIE (afterwards 1ST EARL OF GOWRIE), V.C., P.C., G.C.M.G., C.B., D.S.O., K.G.St.J. From 23 January 1936 to 30 January 1945.

His Royal Highness PRINCE HENRY WILLIAM FREDERICK ALBERT, DUKE OF GLOUCESTER, EARL OF ULSTER AND BARON CULLODEN, K.G., P.C., K.T., K.P., G.C.B., G.C.M.G., G.C.V.O., General in the Army, Air Chief Marshal in the Royal Air Force, One of His Majesty's Personal Aides-de-Camp. From 30 January 1945 to 11 March 1947.

Rt Hon. SIR WILLIAM JOHN MCKELL, G.C.M.G., Q.C. From 11 March 1947 to 8 May 1953.

Field Marshal SIR WILLIAM JOSEPH SLIM (afterwards VISCOUNT SLIM OF YARRALUMLA), K.G., G.C.B., G.C.M.G., G.C.V.O., G.B.E., D.S.O., M.C., K.St.J. From 8 May 1953 to 2 February 1960.

Rt Hon. WILLIAM SHEPHERD, VISCOUNT DUNROSSIL, P.C., G.C.M.G., M.C., K.St.J., Q.C. From 2 February 1960 to 3 February 1961.

Rt Hon. WILLIAM PHILIP, VISCOUNT DE LISLE, V.C., P.C., G.C.M.G., G.C.V.O., K.St.J. From 3 August 1961 to 22 September 1965.

Rt Hon. RICHARD GARDINER, BARON CASEY, K.G., P.C., G.C.M.G., C.H., D.S.O., M.C., K.St.J. From 22 September 1965 to 30 April 1969.

Rt Hon. SIR PAUL HASLUCK, G.C.M.G., G.C.V.O., K.St.J. From 30 April 1969.

*Administrators.* In addition to the holders of the office of Governor-General listed above, certain persons have, from time to time, been appointed as Administrator of the Government of the Commonwealth. Administrators are appointed in the event of the death, illness, or absence from Australia of the Governor-General, or for the period between the departure of a Governor-General and the arrival of his successor. The following is a list of such appointments.



### ADMINISTRATORS

Rt Hon. FREDERIC JOHN NAPIER, BARON CHELMSFORD (afterwards 1ST VISCOUNT CHELMSFORD), K.C.M.G. From 21 December 1909 to 27 January 1910.

Lieut.-Colonel the Rt Hon. ARTHUR HERBERT TENNYSON, BARON SOMERS, K.C.M.G., D.S.O., M.C. From 3 October 1930 to 22 January 1931.

Captain the Rt Hon. WILLIAM CHARLES ARCEDECKNE, BARON HUNTINGFIELD, K.C.M.G., K.St.J. From 29 March 1938 to 24 September 1938.

Major-General SIR WINSTON JOSEPH DUGAN (afterwards 1ST BARON DUGAN OF VICTORIA), G.C.M.G., C.B., D.S.O. From 5 September 1944 to 30 January 1945; 19 January 1947 to 11 March 1947.

General\* SIR JOHN NORTHCOTT, K.C.M.G., K.C.V.O., C.B. From 19 July 1951 to 14 December 1951; 30 July 1956 to 22 October 1956.

General SIR REGINALD ALEXANDER DALLAS BROOKS, K.C.B., K.C.M.G.†, K.C.V.O., D.S.O., K.St.J. From 8 January 1959 to 16 January 1959; 4 February 1961 to 3 August 1961; 5 June 1962 to 3 October 1962; 21 November 1962 to 18 December 1962.

General SIR ERIC WINSLOW WOODWARD, K.C.M.G., K.C.V.O., C.B., C.B.E., D.S.O., K.St.J. From 16 June 1964 to 30 August 1964.

Colonel SIR HENRY ABEL SMITH, K.C.M.G., K.C.V.O., D.S.O., K.St.J. From 7 May 1965 to 22 September 1965.

Lieut.-General SIR EDRIC MONTAGUE BASTYAN, K.C.M.G., K.C.V.O., K.B.E., C.B. From 24 April 1967 to 1 June 1967.

Major-General SIR ROHAN DELACOMBE, K.C.M.G., K.C.V.O., K.B.E., C.B., D.S.O., K.St.J. From 11 February 1971 to 18 February 1971; 12 October 1971 to 19 October 1971.

### Governors of the States

*Powers and functions.* The Queen is represented in each of the States by a Governor, the office having been constituted by Letters Patent under the Great Seal of the United Kingdom of various dates. The Governors of the States exercise prerogative powers conferred on them by these Letters Patent, their Commissions of appointment, and the Governor's Instructions given them under the Royal Sign Manual and Signet or other instrument as specified in the Letters Patent. In addition, they have been invested with various statutory functions by State Constitutions and other Imperial Acts and by Acts of the Parliaments of the States.

A Governor of a State assents in the Queen's name to Bills passed by the Parliament of the State, except those reserved for the Royal assent. The latter include certain classes of Bills which are regulated by the Constitution Acts and by the Governor's Instructions. He administers the prerogative of mercy by the reprieve or pardon of criminal offenders within his jurisdiction, and may remit fines and penalties due to the Crown. In the performance of his functions generally, particularly those conferred by Statute, the Governor of a State acts on the advice of Ministers of State for the State.

*Holders of office.* The names of the present (March 1972) State Governors are as follows:

### STATE GOVERNORS, MARCH 1972

*New South Wales*—SIR ARTHUR RODEN CUTLER, V.C., K.C.M.G., K.C.V.O., C.B.E., K.St.J.

*Victoria*—MAJOR-GENERAL SIR ROHAN DELACOMBE, K.C.M.G., K.C.V.O., K.B.E., C.B., D.S.O., K.St.J.

*Queensland*—SIR COLIN HANNAH, K.B.E., C.B.

*South Australia*—SIR MARK OLIPHANT, K.B.E.

*Western Australia*—MAJOR-GENERAL SIR DOUGLAS ANTHONY KENDREW, K.C.M.G., C.B., C.B.E., D.S.O.

*Tasmania*—LIEUT.-GENERAL SIR EDRIC MONTAGUE BASTYAN, K.C.M.G., K.C.V.O., K.B.E., C.B.

### The Cabinet and executive government

Both in the Commonwealth and in the States, executive government is based on the system which was evolved in Britain in the 18th Century, and which is generally known as 'Cabinet' or 'responsible' government. Its essence is that the head of the State (Her Majesty the Queen, and her representative the Governor-General or Governor) should perform governmental acts on the advice of her Ministers; that she should choose her principal Ministers of State from members of Parliament belonging to the party, or coalition of parties, commanding a majority in the lower House; that the Ministry so chosen should be collectively responsible to that House for the government of the country; and that the Ministry should resign if it ceases to command a majority there.

\* Lieutenant-General Sir John Northcott was granted honorary rank of General while administering the Government of the Commonwealth. † G.C.M.G., 1963.

The Cabinet system operates chiefly by means of constitutional conventions, customs, or understandings, and through institutions that do not form part of the legal structure of the government at all. The Constitutions of the Commonwealth and the States make fuller legal provision for the Cabinet system than the British Constitution does—for example, by requiring that Ministers shall either be, or within a prescribed period become, members of the Legislature. In general, however, the legal structure of the executive government remains the same as it was before the establishment of the Cabinet system.

The executive power of the Commonwealth is exercisable by the Governor-General, and that of the States by the Governor. In each case he is advised by an Executive Council, which, however, meets only for certain formal purposes, as explained below. The whole policy of a Ministry is, in practice, determined by some or all of the Ministers of State, meeting without the Governor-General or Governor under the chairmanship of the Prime Minister or Premier. This group of Ministers is known as the Cabinet.

*The Cabinet.* This body does not form part of the legal mechanism of government. Its meetings are private and deliberative. The actual Ministers of the day alone are present, no records of the meetings are made public, and the decisions taken have, in themselves, no legal effect. In Australia until January 1956 all Ministers were members of the Cabinet. Since then, however, although in the States all Ministers are members of the Cabinet, the Commonwealth ministry is made up of twelve senior Ministers, who constitute the Cabinet, and other Ministers\* of non-Cabinet rank who attend meetings of the Cabinet only when required, as, for example, when the business of the Cabinet concerns their departments. As Ministers are the leaders of the party or parties commanding a majority in the lower House, the Cabinet substantially controls, in ordinary circumstances, not only the general legislative programme of Parliament, but the whole course of Parliamentary proceedings. In effect, though not in form, the Cabinet, by reason of the fact that all Ministers are members of the Executive Council, is also the dominant element in the executive government of the country. Even in summoning, proroguing, or dissolving Parliament, the Governor-General or Governor is usually guided by the advice tendered him by the Cabinet, through the Prime Minister or Premier, though legally the discretion is vested in the Governor-General or Governor himself.

*The Executive Council.* This body is usually presided over by the Governor-General or Governor, the members thereof holding office during his pleasure. All Ministers of State must be members of the Executive Council. In the Commonwealth, and also in the States of Victoria and Tasmania, Ministers remain members of the Executive Council on leaving office, but are not summoned to attend its meetings, for it is an essential feature of the Cabinet system that attendance should be limited to the Ministers of the day. The Meetings of the Executive Council are formal and official in character, and a record of proceedings is kept by the Secretary or Clerk. At Executive Council meetings the decisions of the Cabinet are, where necessary, given legal form, appointments made, resignations accepted, proclamations issued, and regulations and the like approved.

*The appointment of Ministers.* Legally, Ministers hold office during the pleasure of the Governor-General or Governor. In practice, however, the discretion of the Queen's representative in the choice of Ministers is limited by the conventions on which the Cabinet system rests. When a Ministry resigns, the Crown's custom is to send for the leader of the party which commands, or is likely to be able to command, a majority in the Lower House, and to commission him, as Prime Minister or Premier, to 'form a Ministry'—that is, to nominate other persons to be appointed as Ministers of State and to serve as his colleagues in the Cabinet.

*The appointment of Assistant Ministers.* In April 1971 the Prime Minister announced the appointment of Members of Parliament as Assistant Ministers to support certain Senior Ministers. Unlike Ministers, the Assistant Ministers do not administer a Department of State, but are designated to assist a particular Minister in the discharge of his duties. Assistant Ministers are sworn as Executive Councillors.

*Ministers in Upper and Lower Houses.* The following table shows the distribution of Ministers in the Houses of each Parliament in January 1972.

AUSTRALIAN PARLIAMENTS: MINISTERS IN UPPER OR LOWER HOUSES  
JANUARY 1972

<i>Ministers with seats in—</i>	<i>Cwlth</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(a)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
The Upper House	5	2	4	(b)	3	3	..	17
The Lower House	22	16	12	14	7	9	9	89
<b>Total</b>	<b>27</b>	<b>18</b>	<b>16</b>	<b>14</b>	<b>10</b>	<b>12</b>	<b>9</b>	<b>106</b>

(a) By the Constitution Act, the number of Ministers was increased to ten in 1970.

(b) Abolished in 1922.

\* Fifteen from 31 May 1971.

**Commonwealth Ministries**

*Names and tenure of office, 1901 to 1972.* The following list shows the name of each Commonwealth Ministry to hold office since 1 January 1901, and the limits of its term of office.

**COMMONWEALTH MINISTRIES, 1901 TO MARCH 1972**

- (i) BARTON MINISTRY, 1 January 1901 to 24 September 1903.
- (ii) DEAKIN MINISTRY, 24 September 1903 to 27 April 1904.
- (iii) WATSON MINISTRY, 27 April 1904 to 18 August 1904.
- (iv) REID-McLEAN MINISTRY, 18 August 1904 to 5 July 1905.
- (v) DEAKIN MINISTRY, 5 July 1905 to 13 November 1908.
- (vi) FISHER MINISTRY, 13 November 1908 to 2 June 1909.
- (vii) DEAKIN MINISTRY, 2 June 1909 to 29 April 1910.
- (viii) FISHER MINISTRY, 29 April 1910 to 24 June 1913.
- (ix) COOK MINISTRY, 24 June 1913 to 17 September 1914.
- (x) FISHER MINISTRY, 17 September 1914 to 27 October 1915.
- (xi) HUGHES MINISTRY, 27 October 1915 to 14 November 1916.
- (xii) HUGHES MINISTRY, 14 November 1916 to 17 February 1917.
- (xiii) HUGHES MINISTRY, 17 February 1917 to 10 January 1918.
- (xiv) HUGHES MINISTRY, 10 January 1918 to 9 February 1923.
- (xv) BRUCE-PAGE MINISTRY, 9 February 1923 to 22 October 1929.
- (xvi) SCULLIN MINISTRY, 22 October 1929 to 6 January 1932.
- (xvii) LYONS MINISTRY, 6 January 1932 to 7 November 1938.
- (xviii) LYONS MINISTRY, 7 November 1938 to 7 April 1939.
- (xix) PAGE MINISTRY, 7 April 1939 to 26 April 1939.
- (xx) MENZIES MINISTRY, 26 April 1939 to 14 March 1940.
- (xxi) MENZIES MINISTRY, 14 March 1940 to 28 October 1940.
- (xxii) MENZIES MINISTRY, 28 October 1940 to 29 August 1941.
- (xxiii) FADDEN MINISTRY, 29 August 1941 to 7 October 1941.
- (xxiv) CURTIN MINISTRY, 7 October 1941 to 21 September 1943.
- (xxv) CURTIN MINISTRY, 21 September 1943 to 6 July 1945.
- (xxvi) FORDE MINISTRY, 6 July 1945 to 13 July 1945.
- (xxvii) CHIFLEY MINISTRY, 13 July 1945 to 1 November 1946.
- (xxviii) CHIFLEY MINISTRY, 1 November 1946 to 19 December 1949.
- (xxix) MENZIES MINISTRY, 19 December 1949 to 11 May 1951.
- (xxx) MENZIES MINISTRY, 11 May 1951 to 11 January 1956.
- (xxxi) MENZIES MINISTRY, 11 January 1956 to 10 December 1958.
- (xxxii) MENZIES MINISTRY, 10 December 1958 to 18 December 1963.
- (xxxiii) MENZIES MINISTRY, 18 December 1963 to 26 January 1966.
- (xxxiv) HOLT MINISTRY, 26 January 1966 to 14 December 1966.
- (xxxv) HOLT MINISTRY, 14 December 1966 to 19 December 1967.
- (xxxvi) McEWEN MINISTRY, 19 December 1967 to 10 January 1968.
- (xxxvii) GORTON MINISTRY, 10 January 1968 to 28 February 1968.
- (xxxviii) GORTON MINISTRY, 28 February 1968 to 12 November 1969.
- (xxxix) GORTON MINISTRY, 12 November 1969 to 10 March 1971.
- (xl) McMAHON MINISTRY, 10 March 1971.

*Names of members of each Ministry to 22 March 1972.* In Year Book No. 17, 1924, the names are given of each Ministry up to the Bruce-Page Ministry (9 February 1923 to 22 October 1929), together with the names of the successive holders of portfolios therein, and issue No. 39 contains a list, commencing with the Bruce-Page Ministry, which covers the period between the date on which it assumed power, 9 February 1923, and 31 July 1951, showing the names of all persons who held office in each Ministry during that period. The names of members of subsequent Ministries are listed in successive issues of the Year Book after No. 39.

This issue shows only particulars of the McMahon Ministry.



## THE McMAHON MINISTRY—FROM 22 MARCH 1972

(The State in which each Minister's electorate is situated and party affiliation are shown in parenthesis. Party affiliation is indicated by the use of the following abbreviations: C.P.—Australian Country Party, L.P.—Liberal Party of Australia.)

*\*Prime Minister—*

THE RT HON. W. McMAHON, M.P. (N.S.W.) (L.P.)

*\*Deputy Prime Minister and Minister for Trade and Industry—*

THE RT HON. J. D. ANTHONY, M.P. (N.S.W.) (C.P.)

*\*Treasurer—*

THE HON. B. M. SNEDDEN, Q.C., M.P. (Vic.) (L.P.)

*\*Minister for Primary Industry—*

THE HON. I. McC. SINCLAIR, M.P. (N.S.W.) (C.P.)

*\*Minister for Health and Leader of the Government in the Senate—*

SENATOR THE HON. SIR KENNETH ANDERSON K.B.E., (N.S.W.) (L.P.)

*\*Minister for National Development and Leader of the House—*

THE HON. R. W. C. SWARTZ, M.B.E., E.D., M.P. (Qld) (L.P.)

*\*Minister for Foreign Affairs—*

THE HON. N. H. BOWEN, Q.C., M.P. (N.S.W.) (L.P.)

*\*Minister for Defence—*

THE HON. D. E. FAIRBAIRN, D.F.C., M.P. (N.S.W.) (L.P.)

*\*Postmaster-General and Vice-President of the Executive Council—*

THE HON. SIR ALAN HULME, K.B.E., M.P. (Qld) (L.P.)

*\*Minister for Shipping and Transport—*

THE HON. P. J. NIXON, M.P. (Vic.) (C.P.)

*\*Minister for Labour and National Service—*

THE HON. P. R. LYNCH, M.P. (Vic.) (L.P.)

*\*Minister for Education and Science—*

THE HON. J. M. FRASER, M.P. (Vic.) (L.P.)

*Minister for Air—*

SENATOR THE HON. T. C. DRAKE-BROCKMAN, D.F.C. (W.A.) (C.P.)

*Minister for Immigration—*

THE HON. A. J. FORBES, M.C., M.P. (S.A.) (L.P.)

*Minister for Social Services—*

THE HON. W. C. WENTWORTH, M.P. (N.S.W.) (L.P.)

*Minister for Works—*

SENATOR THE HON. R. C. WRIGHT (Tas.) (L.P.)

*Minister for Civil Aviation—*

SENATOR THE HON. R. C. COTTON (N.S.W.) (L.P.)

*Minister for Customs and Excise, Deputy Leader of the House and Minister assisting the Minister for National Development—*

THE HON. D. L. CHIPP, M.P. (Vic.) (L.P.)

*Minister for Repatriation and Minister assisting the Minister for Trade and Industry—*

THE HON. R. McN. HOLTEN, M.P. (Vic.) (C.P.)

*Minister for External Territories—*

THE HON. A. S. PEACOCK, M.P. (Vic.) (L.P.)

*Minister for the Interior—*

THE HON. R. J. D. HUNT, M.P. (N.S.W.) (C.P.)

*Attorney-General—*

SENATOR THE HON. I. J. GREENWOOD, Q.C. (Vic.) (L.P.)

*Minister for the Navy—*

THE HON. M. G. MACKAY, M.P. (N.S.W.) (L.P.)

*Minister for Housing—*

THE HON. K. M. K. CAIRNS, M.P. (Qld) (L.P.)

*Minister for the Environment, Aborigines and the Arts and Minister in Charge—Tourist Activities*

THE HON. P. HOWSON, M.P. (Vic.) (L.P.)

*Minister for Supply and Minister assisting the Treasurer—*

THE HON. R. V. GARLAND, M.P. (W.A.) (L.P.)

*Minister for the Army—*

THE HON. R. C. KATTER, M.P. (Qld) (C.P.)

*Assistant Ministers—**Assistant Minister assisting the Minister for Labour and National Service—*

THE HON. A. A. STREET, M.P. (Vic.) (L.P.)

*Assistant Minister Assisting the Prime Minister—*

THE HON. J. D. M. DOBIE, M.P. (N.S.W.) (C.P.)

*Assistant Minister assisting the Postmaster-General—*

THE HON. I. ROBINSON, M.P. (Vic.) (C.P.)

*Assistant Minister assisting the Minister for Health and Leader of the Government in the Senate—*

SENATOR THE HON. J. E. MARRIOTT (Tas.) (L.P.)

*Assistant Minister assisting the Minister for Primary Industry—*

THE HON. R. S. KING, M.P. (Vic.) (C.P.)

*Assistant Minister assisting the Minister for Civil Aviation—*

THE HON. J. E. McLEAY, M.P. (S.A.) (L.P.)

\* Minister in the Cabinet.

*Names of Ministers of State.* Year Book No. 38 contains a statement listing the Commonwealth Departments in existence during the period 1 April 1925 to 31 December 1949 and the names of the Ministers of State who had administered them (pages 74–9). This is in continuation of a similar statement covering the period from the inauguration of the Commonwealth Government to 1925 which appears in Year Book No. 18.

### State Premiers, March 1972

The names of the Premiers of each State in March 1972 are shown below.

#### STATE PREMIERS, MARCH 1972

*New South Wales*—The Hon. Sir Robert Askin, K.C.M.G., M.L.A. (L.P.)

*Victoria*—The Hon. Sir Henry Bolte, G.C.M.G., M.P. (L.P.)

*Queensland*—The Hon. J. Bjelke-Petersen, M.L.A. (C.P.)

*South Australia*—The Hon. D. A. Dunstan, Q.C., M.P. (A.L.P.)

*Western Australia*—The Hon. J. T. Tonkin, M.L.A. (A.L.P.)

*Tasmania*—The Hon. W. A. Bethune, M.H.A. (L.P.)

### Leaders of the Opposition, Commonwealth and State Parliaments, March 1972

The Leader of the Opposition plays an important part in the Party system of government which operates in the Australian Parliaments. The following list gives the names of the holders of this position in each of the Parliaments in March 1972.

#### LEADERS OF THE OPPOSITION, MARCH 1972

*Commonwealth*—E. G. Whitlam, Q.C., M.P. (A.L.P.)

*New South Wales*—P. D. Hills, M.L.A. (A.L.P.)

*Victoria*—A. C. Holding, M.P. (A.L.P.)

*Queensland*—J. W. Houston, M.L.A. (A.L.P.)

*South Australia*—Dr B. C. Eastick, M.P. (L.C.L.)

*Western Australia*—The Hon. Sir David Brand, K.C.M.G., M.L.A. (L.P.)

*Tasmania*—The Hon. E. E. Reece, M.H.A. (A.L.P.)

### Numbers and salaries of Commonwealth Ministers

Under sections 65 and 66, respectively, of the Constitution of the Commonwealth the number of Ministers of State was not to exceed seven, and the annual sum payable for their salaries was not to exceed £12,000 (\$24,000), each provision to operate, however, 'until the Parliament otherwise provides'.

Subsequently the number and salaries have been increased from time to time, and from May 1971 the annual sum payable for salaries has been fixed at \$253,000 and the number of Ministers at twenty-seven. An additional ministerial allowance of \$10,300 a year has been payable to the Prime Minister since December 1968, and an additional ministerial allowance of \$4,600 a year for senior Ministers and \$4,000 a year for other Ministers.

All amounts payable in the foregoing paragraphs are in addition to amounts payable as Parliamentary allowances (*see* page 75).

## Parliaments and elections

### The Commonwealth Parliaments

The first Parliament of the Commonwealth was convened by proclamation dated 29 April 1901 by His Excellency the Marquis of Linlithgow, then Earl of Hopetoun, Governor-General. It was opened on 9 May 1901 by H.R.H. the Duke of Cornwall and York. The Rt Hon. Sir Edmund Barton, G.C.M.G., K.C., was Prime Minister.

The following table shows the number and duration of Parliaments since federation.

## COMMONWEALTH PARLIAMENTS

<i>Number of Parliament</i>	<i>Date of opening</i>	<i>Date of dissolution</i>
First . . . . .	9 May 1901 . . . . .	23 November 1903
Second . . . . .	2 March 1904 . . . . .	5 November 1906
Third . . . . .	20 February 1907 . . . . .	19 February 1910
Fourth . . . . .	1 July 1910 . . . . .	23 April 1913
Fifth . . . . .	9 July 1913 . . . . .	30 July 1914(a)
Sixth . . . . .	8 October 1914 . . . . .	26 March 1917
Seventh . . . . .	14 June 1917 . . . . .	3 November 1919
Eighth . . . . .	26 February 1920 . . . . .	6 November 1922
Ninth . . . . .	28 February 1923 . . . . .	3 October 1925
Tenth . . . . .	13 January 1926 . . . . .	9 October 1928
Eleventh . . . . .	6 February 1929 . . . . .	16 September 1929
Twelfth . . . . .	20 November 1929 . . . . .	27 November 1931
Thirteenth . . . . .	17 February 1932 . . . . .	7 August 1934
Fourteenth . . . . .	23 October 1934 . . . . .	21 September 1937
Fifteenth . . . . .	30 November 1937 . . . . .	27 August 1940
Sixteenth . . . . .	20 November 1940 . . . . .	7 July 1943
Seventeenth . . . . .	23 September 1943 . . . . .	16 August 1946
Eighteenth . . . . .	6 November 1946 . . . . .	31 October 1949
Nineteenth . . . . .	22 February 1950 . . . . .	19 March 1951(a)
Twentieth . . . . .	12 June 1951 . . . . .	21 April 1954
Twenty-first . . . . .	4 August 1954 . . . . .	4 November 1955
Twenty-second . . . . .	15 February 1956 . . . . .	14 October 1958
Twenty-third . . . . .	17 February 1959 . . . . .	2 November 1961
Twenty-fourth . . . . .	20 February 1962 . . . . .	1 November 1963
Twenty-fifth . . . . .	25 February 1964 . . . . .	31 October 1966
Twenty-sixth . . . . .	21 February 1967 . . . . .	29 September 1969
Twenty-seventh . . . . .	25 November 1969 . . . . .	

(a) A dissolution of both the Senate and the House of Representatives was granted by the Governor-General, acting on the advice of the Cabinet and under section 57 of the Constitution.

There have been twenty-six complete Parliaments since Federation. Until 1927 the Parliament met in Melbourne; it now meets in Canberra, the first meeting at Parliament House, Canberra, being opened by the Duke of York on 9 May 1927.

The twenty-sixth Parliament opened on 21 February 1967 and ended on 29 September 1969 when the House of Representatives was dissolved. Elections for the House of Representatives were held on 25 October 1969. Elections were also held on the same date to fill casual vacancies in the Senate for each of the States of Victoria, and South Australia. Particulars of electors and voting are given on page 70. For particulars of electors enrolled and of electors who voted in the several States and Territories at previous Commonwealth elections, *see* Year Book No. 56 and earlier issues.

A special article describing the Commonwealth Parliament, its functions and procedure, prepared by the Clerk of the Senate and the Clerk of the House of Representatives, appears in Year Book No. 49, pages 65-71.

#### Qualifications for membership and for franchise—Commonwealth Parliament

Qualifications necessary for membership of either House of the Commonwealth Parliament are possessed by any British subject, twenty-one years of age or over and not disqualified on other grounds, who has resided in the Commonwealth for at least three years and who is, or is qualified to become an elector of the Commonwealth. Qualifications for Commonwealth franchise are possessed by any British subject, not under twenty-one years of age and not disqualified on other grounds, who has lived in Australia for six months continuously. Residence in a Subdivision for a period of one month prior to enrolment is necessary to enable a qualified person to enrol. Enrolment and voting are compulsory except that the compulsory enrolment provisions do not relate to an Aboriginal native of Australia. A member of the Defence Force on service outside Australia who is not less than twenty-one years of age, is a British subject and has lived in Australia for six months continuously is entitled to vote at Commonwealth elections even though he may not be enrolled. A member or former member of the Defence Force who is less than twenty-one years of age who is, or has been, on 'special service' outside Australia as a member of the Defence Force and is a British subject who lived in Australia for six months continuously prior to the commencement of that service, is entitled to vote at Commonwealth elections. 'Special service' takes the same meaning as that term in the Repatriation (Special Overseas Service) Act and means in relation to a person, service during a period when he is outside Australia and he, or his unit, is allotted for special duty in a specified area.



The principal reasons for disqualification of persons otherwise eligible for election as members of either Commonwealth House are: membership of the other House, allegiance to a foreign power, being attainted of treason, being convicted and under sentence for any offence punishable by imprisonment for one year or longer, being an undischarged bankrupt or insolvent, holding an office of profit under the Crown (with certain exceptions), or having pecuniary interest in any agreement with the public service of the Commonwealth except as a member of an incorporated company of more than twenty-five persons. Persons of unsound mind, attainted of treason, convicted and under sentence for any offence punishable by imprisonment for one year or longer, or persons who are holders of temporary entry permits under the *Migration Act* 1958–1966 or are prohibited immigrants under that Act are excluded from the franchise. In the main, these or similar grounds for disqualification apply also to State Parliament membership and franchise. Aborigines are entitled to enrol and to vote at both Commonwealth and State elections in all States.

### Commonwealth Parliaments and elections

From the establishment of the Commonwealth until 1949 the Senate consisted of thirty-six members, six being returned by each of the original federating States. The Constitution empowers Parliament to increase or decrease the size of the Parliament, and, as the population of the Commonwealth had more than doubled since its inception, the Parliament passed the *Representation Act* 1948 which provided that there should be ten Senators from each State instead of six, increasing the total to sixty Senators, thus enlarging both Houses of Parliament and providing a representation ratio nearer to the proportion which existed at Federation.

In accordance with the Constitution the total number of members of the House of Representatives must be as nearly as practicable double that of the Senate.\* Consequently, in terms of the Constitution and the Representation Act, from the date of the 1949 elections the number of members in the House of Representatives was increased from 74 to 121 (excluding the members for the internal Territories). As the States are represented in the House of Representatives on a population basis, the numbers were increased as follows: New South Wales—from 28 to 47; Victoria—from 20 to 33; Queensland—from 10 to 18; South Australia—from 6 to 10; and Western Australia—from 5 to 8. Tasmania's representation remained at 5 (the Constitution provides for a minimum of 5 members for each Original State). The increase in the number of members of Parliament necessitated a redistribution of seats and a redetermination of electoral boundaries. Redistributions are carried out by distribution commissioners appointed for each State. The redistributions are effected on a quota basis, but taking into account community interests, means of communication, physical features, existing boundaries, and other factors.

The population as disclosed by the Census taken on 30 June 1954 necessitated a further alteration in representation in the House of Representatives in respect of New South Wales, South Australia, and Western Australia. Representation as from the general election for the House of Representatives on 10 December 1955 was: New South Wales 46, Victoria 33, Queensland 18, South Australia 11, Western Australia 9, Tasmania 5, the total number of members (excluding the members for the internal Territories) being increased from 121 to 122.

The population as disclosed by the Census taken on 30 June 1961 revealed that, under the provisions of the Representation Act, New South Wales, Queensland, and Western Australia would each lose one member in the House of Representatives, while Victoria would gain a member. The distribution commissioners' reports were duly laid before both Houses of Parliament, but the Government decided not to proceed with the proposals and announced that it would amend the Representation Act. In November 1964 the formula provided by Section 10 of the Representation Act for determining the number of members of the House of Representatives was amended so as to give a State an additional member for 'any portion of a quota'. The effect of that amendment would have been that at the next redistribution Victoria and South Australia would each gain one member while all other States would retain their existing representation. However, no fresh redistribution was effected prior to the 1966 Census. Consequent upon the population changes disclosed by the Census taken on 30 June 1966, a redistribution of the State electoral division boundaries was carried out in 1968 and the following representation in the House of Representatives became effective as from the general election held on 25 October 1969: New South Wales 45, Victoria 34, Queensland 18, South Australia 12, Western Australia 9 and Tasmania 5, the total number of members (excluding the members for the internal Territories) being increased from 122 to 123.

Since the general election of 1922 the Northern Territory has been represented by one member in the House of Representatives, and the Australian Capital Territory has had similar representation since the elections of 1949. The member for the Australian Capital Territory has had full voting

\* A proposal to alter the Constitution so that numbers of members of the House of Representatives might be increased without necessarily increasing the number of Senators was the subject of a referendum in March 1967, but was rejected. See Year Book No. 54, page 66, for results of the Referendum.

rights since the first sitting of the twenty-sixth Parliament. In May 1968 the Northern Territory Representation Act was amended to give full voting rights to the Member for the Northern Territory effective from 15 May 1968, the day on which the Act received Royal Assent.

Members of the House of Representatives are elected for the duration of the Parliament, which is limited to three years. At elections for Senators the whole State constitutes the electorate. For the purpose of elections for the House of Representatives the State is divided into single electorates corresponding in number to the number of members to which the State is entitled. Further information regarding the Senate and the House of Representatives is given in earlier issues of the Year Book.

The *Commonwealth Electoral Act* 1948, enacted with the *Representation Act* 1948 which enlarged the Commonwealth Parliament (see page 69), changed the system of scrutiny and counting of votes in Senate elections from the alternative vote to that of proportional representation. For a description of the system, see Year Book No. 38, pages 82-3. The method of voting for both the Senate and the House of Representatives is preferential.

Particulars of voting at Senate elections and elections for the House of Representatives up to 1967 appear in earlier issues of the Year Book, and additional information is available in the *Statistical Returns* issued by the Chief Electoral Officer following each election and printed as Parliamentary Papers.

The numbers of electors and primary votes cast for the major political parties in each State and Territory at the latest election for each House were as follows.

#### COMMONWEALTH ELECTIONS, 1969 AND 1970

Votes recorded								
State or Territory	Electors enrolled	Liberal Party of Australia	Aus- tralian Country Party	Aus- tralian Labor Party	Aus- tralian Demo- cratic Labor Party	Others	Informal	Total
HOUSE OF REPRESENTATIVES ELECTION, 25 OCTOBER 1969								
New South Wales .	2,438,667	760,612	220,539	1,074,916	75,905	122,216	53,811	2,307,999
Victoria . . .	1,809,549	626,474	113,958	689,515	180,205	57,722	56,724	1,724,598
Queensland . .	953,564	245,159	152,041	430,403	60,841	4,142	11,463	904,049
South Australia .	624,626	245,287	..	303,419	17,930	12,521	20,562	599,719
Western Australia .	484,128	160,473	28,413	222,709	24,461	9,031	11,699	456,786
Tasmania . . .	211,220	72,490	..	105,556	8,635	13,741	3,538	203,960
Northern Territory	21,186	..	8,281	5,204	..	3,629	613	17,727
Australian Capital Territory . . .	63,293	15,492	..	39,070	..	3,128	1,083	58,773
Australia . . .	6,606,233	2,125,987	523,232	2,870,792	367,977	226,130	159,493	6,273,611
SENATE ELECTION, 21 NOVEMBER 1970								
New South Wales .	2,455,958	786,229		939,721	144,544	193,972	231,345	2,295,811
Victoria . . .	1,848,117	588,817		565,098	294,413	95,782	198,865	1,742,975
Queensland . . .	958,449	311,905		350,034	136,850	36,039	64,652	899,480
South Australia .	639,807	233,054		251,117	17,902	64,889	42,306	609,268
Western Australia .	497,066	109,890	59,416	184,648	23,938	49,944	35,162	462,998
Tasmania . . .	212,345	59,712		85,597	7,495	37,827	12,600	203,231
Australia . . .	6,611,742	2,149,023		2,376,215	625,142	478,453	584,930	6,213,763

Membership at the beginning of 1972 was: *Senate*—Liberal Party of Australia, 21; Australian Country Party, 5; Australian Labor Party, 26; Australian Democratic Labor Party, 5; Independent, 3; *House of Representatives*—Liberal Party of Australia, 46; Australian Country Party, 20; Australian Labor Party, 59.

**Members of the Commonwealth Parliament**

The following is a list of Senators and Members of the House of Representatives of the Commonwealth Parliament as at 1 January 1972. Changes since that date are set out in the Appendix to this volume. Party affiliation is indicated by the use of the following abbreviations:

A.D.L.P.—Australian Democratic Labor Party

A.L.P.—Australian Labor Party

C.P.—Australian Country Party

Ind.—Independent

L.P.—Liberal Party of Australia

**MEMBERS OF THE COMMONWEALTH PARLIAMENT, 1 JANUARY 1972(a)**

**THE SENATE**

*President:*

SENATOR THE HON. SIR MAGNUS CAMERON CORMACK, K.B.E.

*Chairman of Committees:*

SENATOR E. W. PROWSE

*Leader of the Government in the Senate:*

SENATOR THE HON. SIR KENNETH ANDERSON, K.B.E.

*Leader of the Opposition in the Senate:*

SENATOR L. K. MURPHY, Q.C.

<i>Senator</i>	<i>State</i>	<i>Term(b) expires 30 June</i>	<i>Senator</i>	<i>State</i>	<i>Term(b) expires 30 June</i>
Anderson, Hon. Sir Kenneth K.B.E., (L.P.)	N.S.W.	1977	Laucke, C. L. (L.P.)	S.A.	1974
Bishop, R. (A.L.P.)	S.A.	1974	Lawrie, A. G. E. (C.P.)	Qld	1977
Bonner, N. T. (L.P.)	Qld	(c)	Lillico, A. E. D. (L.P.)	Tas.	1977
Brown, W. W. C. (A.L.P.)	Vic.	1977	Little, J. A. (A.D.L.P.)	Vic.	1974
Buttfield, Dame Nancy D.B.E. (L.P.)	S.A.	1974	McAuliffe, R. E. (A.L.P.)	Qld	1977
Byrne, C. B. (A.D.L.P.)	Qld	1974	McClelland, D. (A.L.P.)	N.S.W.	1974
Cameron, D.N. (A.L.P.)	S.A.	1977	McClelland, J. R. (A.L.P.)	N.S.W.	1977
Cant, H.G.J. (A.L.P.)	W.A.	1977	McLaren, G. T. (A.L.P.)	S.A.	1977
Carrick, J. L. (L.P.)	N.S.W.	1977	McManus, F. P. (A.D.L.P.)	Vic.	1977
Cavanagh, J. L. (A.L.P.)	S.A.	1974	Marriott, Hon. J. E. (L.P.)	Tas.	1977
Cormack, Hon. Sir Magnus, K.B.E. (L.P.)	Vic.	1974	Maunsell, C. R. (C.P.)	Qld	1974
Cotton, Hon. R. C. (L.P.)	N.S.W.	1974	Milliner, B. R. (A.L.P.)	Qld	1974
Davidson, G. S. (L.P.)	S.A.	1977	Mulvihill, J. A. (A.L.P.)	N.S.W.	1977
Devitt, D. M. (A.L.P.)	Tas.	1977	Murphy, L. K., Q.C. (A.L.P.)	N.S.W.	1974
Drake-Brockman, Hon. T. C., D.F.C. (C.P.)	W.A.	1977	Negus, S. A. (Ind.)	W.A.	1977
Drury, A. J. (A.L.P.)	S.A.	1977	O'Byrne, J. (A.L.P.)	Tas.	1977
Durack, P. D. (L.P.)	W.A.	1977	Poke, A. G. (A.L.P.)	Tas.	1974
Fitzgerald, J. F. (A.L.P.)	N.S.W.	1974	Poyser, A. G. (A.L.P.)	Vic.	1974
Gair, Hon. V. C. (A.D.L.P.)	Qld	1977	Primmer, C. G. (A.L.P.)	Vic.	1977
Georges, G. (A.L.P.)	Qld	1974	Prowse, E. W. (C.P.)	W.A.	1974
Gietzelt, A. T. (A.L.P.)	N.S.W.	1977	Rae, P. E. (L.P.)	Tas.	1974
Greenwood, Hon. I. J., Q.C. (L.P.)	Vic.	1977	Sims, J. P. (L.P.)	W.A.	1974
Guilfoyle, Margaret G. C. (L.P.)	Vic.	1977	Townley, M. (Ind.)	Tas.	1977
Hannan, G. C. (L.P.)	Vic.	1974	Turnbull, R. J. D. (Ind.)	Tas.	1974
Jessop, D. S. (L.P.)	S.A.	1977	Webster, J. J. (C.P.)	Vic.	1974
Kane, J. T. (A.D.L.P.)	N.S.W.	1974	Wheeldon, J. M. (A.L.P.)	W.A.	1977
Keeffe, J. B. (A.L.P.)	Qld	1977	Wilkinson, L. D. (A.L.P.)	W.A.	1974
			Willesee, D. R. (A.L.P.)	W.A.	1974
			Withers, R. G. (L.P.)	W.A.	1974
			Wood, I. A. C. (L.P.)	Qld	1977
			Wriedt, K. S. (A.L.P.)	Tas.	1974
			Wright, Hon. R. C. (L.P.)	Tas.	1974
			Young, H. W. (L.P.)	S.A.	1974

(a) For later changes see Appendix. (b) Senators are elected for a term of six years on a rotational basis; the terms of half the Senators expire every third year. (c) Chosen to fill a casual vacancy; subject to Section 15 of the Constitution.



MEMBERS OF THE COMMONWEALTH PARLIAMENT  
1 JANUARY 1972(a)—continued

THE HOUSE OF REPRESENTATIVES  
(Triennial Parliaments—Last General Election  
25 October 1969)

*Speaker:*

THE HON. SIR WILLIAM ASTON, K.C.M.G., M.P.

*Chairman of Committees:*

P. E. LUCOCK, C.B.E., M.P.

*Leader of the House:*

THE HON. R. C. W. SWARTZ, M.B.E., E.D., M.P.

*Leader of the Opposition:*

E. G. WHITLAM, Q.C., M.P.

<i>Member</i>	<i>Division</i>	<i>Member</i>	<i>Division</i>
Adermann, Rt Hon. Sir Charles, K.B.E. (C.P.)	Fisher (Q.)	Daly, F. M. (A.L.P.)	Grayndler (N.S.W.)
Anthony, Rt Hon. J. D. (C.P.)	Richmond (N.S.W.)	Davies, R. (A.L.P.)	Braddon (T.)
Armitage, J. L. (A.L.P.)	Chifley (N.S.W.)	Dobie, Hon. J. D. M. (L.P.)	Cook (N.S.W.)
Aston, Hon. Sir William K.C.M.G. (L.P.)	Phillip (N.S.W.)	Drury, E. N. (L.P.)	Ryan (Q.)
Barnard, L. H. (A.L.P.)	Bass (T.)	Duthie, G. W. A. (A.L.P.)	Wilmot (T.)
Barnes, Hon. C. E. (C.P.)	McPherson (Q.)	Enderby, K. E. (A.L.P.)	Aust. Cap. Terr.
Bate, H. J. (L.P.)	Macarthur (N.S.W.)	England, J. A., E.D. (C.P.)	Calare (N.S.W.)
Beazley, K. E. (A.L.P.)	Fremantle (W.A.)	Erwin, Hon. G. D. (L.P.)	Ballaarat (V.)
Bennett, A. F. (A.L.P.)	Swan (W.A.)	Everingham, D. N. (A.L.P.)	Capricornia (Q.)
Berinson, J. M. (A.L.P.)	Perth (W.A.)	Fairbairn, Hon. D. E., D.F.C. (L.P.)	Farrer (N.S.W.)
Birrell, F. R. (A.L.P.)	Port Adelaide (S.A.)	FitzPatrick, J. (A.L.P.)	Darling (N.S.W.)
Bonnett, R. N. (L.P.)	Herbert (Q.)	Forbes, Hon. A. J., M.C. (L.P.)	Barker (S.A.)
Bowen, L. F. (A.L.P.)	Kingsford-Smith (N.S.W.)	Foster, N. K. (A.L.P.)	Sturt (S.A.)
Bowen, Hon. N. H., Q.C. (L.P.)	Parramatta (N.S.W.)	Fox, E. M. C. (L.P.)	Henty (V.)
Brown, N. A. (L.P.)	Diamond Valley (V.)	Fraser, A. D. (A.L.P.)	Eden-Monaro (N.S.W.)
Bryant, G. M., E.D. (A.L.P.)	Wills (V.)	Fraser, Hon. J. M. (L.P.)	Wannon (V.)
Buchanan, A. A. (L.P.)	McMillan (V.)	Fulton, W. J. (A.L.P.)	Leichhardt (Q.)
Bury, Hon. L. H. E. (L.P.)	Wentworth (N.S.W.)	Garland, Hon. R. V. (L.P.)	Curtin (W.A.)
Cairns, J. F. (A.L.P.)	Lalor (V.)	Garrick, H. J. (A.L.P.)	Batman (V.)
Cairns, Hon. K. M. K. (L.P.)	Lilley (Q.)	Giles, G. O'H. (L.P.)	Angas (S.A.)
Calder, S. E., D.F.C. (C.P.)	Northern Territory	Gorton, Rt Hon. J. G. C.H., (L.P.)	Higgins (V.)
Calwell, Rt Hon. A. A. (A.L.P.)	Melbourne (V.)	Graham, B. W. (L.P.)	North Sydney (N.S.W.)
Cameron, C. R. (A.L.P.)	Hindmarsh (S.A.)	Grassby, A. J. (A.L.P.)	Riverina (N.S.W.)
Cameron, D. M. (L.P.)	Griffith (Q.)	Griffiths, C. E. (A.L.P.)	Shortland (N.S.W.)
Cass, M. H. (A.L.P.)	Maribyrnong (V.)	Gun, R. T. (A.L.P.)	Kingston (S.A.)
Chipp, Hon. D. L. (L.P.)	Hotham (V.)	Hallett, J. M. (C.P.)	Canning (W.A.)
Cohen, B. (A.L.P.)	Robertson (N.S.W.)	Hamer, D. J., D.S.C. (L.P.)	Isaacs (V.)
Collard, F. W. (A.L.P.)	Kalgoorlie (W.A.)	Hansen, B. P. (A.L.P.)	Wide Bay (Q.)
Connor, R. F. X. (A.L.P.)	Cunningham (N.S.W.)	Hayden, W. G. (A.L.P.)	Oxley (Q.)
Cope, J. F. (A.L.P.)	Sydney (N.S.W.)	Holten, Hon. R. McN. (C.P.)	Indi (V.)
Corbett, J. (C.P.)	Maranoa (Q.)	Howson, Hon. P. (L.P.)	Casey (V.)
Cramer, Hon. Sir John (L.P.)	Bennelong (N.S.W.)	Hughes, Hon., T. E. F., Q.C. (L.P.)	Berowra (N.S.W.)
Crean, F. (A.L.P.)	Melbourne Ports (V.)		
Cross, M. D. (A.L.P.)	Brisbane (Q.)		

(a) For later changes see Appendix.

MEMBERS OF THE COMMONWEALTH PARLIAMENT  
1 JANUARY 1972(a)—continued  
THE HOUSE OF REPRESENTATIVES—continued

<i>Member</i>	<i>Division</i>	<i>Member</i>	<i>Division</i>
Hulme, Hon. Sir Alan, K.B.E. (L.P.)	Petrie (Q.)	McMahon, Rt Hon. W., C.H. (L.P.)	Lowe (N.S.W.)
Hunt, Hon. R. J. D. (C.P.)	Gwydir (N.S.W.)	Morrison, W. L. (A.L.P.)	St George (N.S.W.)
Hurford, C. J. (A.L.P.)	Adelaide (S.A.)	Nicholls, M. H. (A.L.P.)	Bonython (S.A.)
Irwin, L. H., C.B.E. (L.P.)	Mitchell (N.S.W.)	Nixon, Hon. P. J. (C.P.)	Gippsland (V.)
Jacobi, R. (A.L.P.)	Hawker (S.A.)	O'Keefe, F. L. (C.P.)	Paterson (N.S.W.)
James, A. W. (A.L.P.)	Hunter (N.S.W.)	Patterson, R. A. (A.L.P.)	Dawson (Q.)
Jarman, A. W. (L.P.)	Deakin (V.)	Peacock, Hon. A. S. (L.P.)	Kooyong (V.)
Jenkins, H. A. (A.L.P.)	Scullin (V.)	Pettitt, J. A. (C.P.)	Hume (N.S.W.)
Jess, J. D., C.B.E. (L.P.)	La Trobe (V.)	Reid, L. S., D.F.C. (L.P.)	Holt (V.)
Johnson, L. K. (A.L.P.)	Burke (V.)	Reynolds, L. J. (A.L.P.)	Barton (N.S.W.)
Johnson, L. R. (A.L.P.)	Hughes (N.S.W.)	Robinson, Hon. I. L. (C.P.)	Cowper, (N.S.W.)
Jones, C. K. (A.L.P.)	Newcastle (N.S.W.)	Scholes, G. G. D. (A.L.P.)	Corio (V.)
Katter, Hon. R. C. (C.P.)	Kennedy (Q.)	Sherry, R. H. (A.L.P.)	Franklin (T.)
Keating, P. J. (A.L.P.)	Blaxland (N.S.W.)	Sinclair, Hon. I. McC. (C.P.)	New England (N.S.W.)
Kelly, Hon. C. R. (L.P.)	Wakefield (S.A.)	Snedden, Hon. B. M., Q.C. (L.P.)	Bruce (V.)
Kennedy, A. D. (A.L.P.)	Bendigo (V.)	Solomon, R. J. (L.P.)	Denison (T.)
Keogh, L. J. (A.L.P.)	Bowman (Q.)	Staley, A. A. (L.P.)	Chisholm (V.)
Killen, Hon. D. J. (L.P.)	Moreton (Q.)	Stewart, F. E. (A.L.P.)	Lang (N.S.W.)
King, R. S. (C.P.)	Wimmera (V.)	Street, Hon. A. A. (L.P.)	Corangamite (V.)
Kirwan, F. McL. (A.L.P.)	Forrest (W.A.)	Swartz, Hon. R. W. C., M.B.E., E.D. (L.P.)	Darling Downs (Q.)
Klugman, R. E. (A.L.P.)	Prospect (N.S.W.)	Turnbull, Sir Winton, C.B.E. (C.P.)	Mallee (V.)
Lloyd, B. (C.P.)	Murray (V.)	Turner, H. B. (L.P.)	Bradfield (N.S.W.)
Luchetti, A. S. (A.L.P.)	Macquarie (N.S.W.)	Uren, T. (A.L.P.)	Reid (N.S.W.)
Lucock, P. E., C.B.E. (C.P.)	Lyne (N.S.W.)	Wallis, L. G. (A.L.P.)	Grey (S.A.)
Lynch, Hon. P. R. (L.P.)	Flinders (V.)	Webb, C. H. (A.L.P.)	Stirling (W.A.)
Mackay, Hon. M. G. (L.P.)	Evans (N.S.W.)	Wentworth, Hon. W. C. (L.P.)	Mackellar (N.S.W.)
Mackellar, M. J. R. (L.P.)	Warringah (N.S.W.)	Whitlam, E. G., Q.C. (A.L.P.)	Werriwa (N.S.W.)
Maisey, D. W. (C.P.)	Moore (W.A.)	Whittorn, R. H. (L.P.)	Balaclava (V.)
Martin, V. J. (A.L.P.)	Banks (N.S.W.)		
McIvor, H. J., O.B.E. (A.L.P.)	Gellibrand (V.)		
McLeay, Hon. J. E. (L.P.)	Boothby (S.A.)		

(a) For later changes see Appendix.

**Commonwealth referendums**

In accordance with section 128 of the Constitution any proposed law for the alteration of the Constitution, in addition to being passed by an absolute majority of each House of Parliament, must be submitted to a referendum of the electors in each State, and must be approved by a majority of the electors in a majority of the States and also by a majority of all the electors who voted, before it can be presented for Royal Assent. Twenty-six such proposals have so far been submitted to referendums and the consent of the electors has been received in five cases, the first in relation to the election of Senators in 1906, the second and third in respect of State Debts—one in 1910 and the other in 1928, the fourth in respect of Social Services in 1946, and the fifth in respect of Aborigines in 1967. In addition to referendums for alterations of the Constitution, other Commonwealth referendums have been held, two prior to Federation regarding the proposed Constitution and two regarding military service during the 1914–1918 War. For details of earlier referendums see Year Book No. 52, pages 66–8.

On 1 March 1967 two Bills were introduced in the House of Representatives to alter the Constitution, one to enable the number of members of the House of Representatives to be increased without necessarily increasing the number of Senators, the other to enable the Aboriginal people to be counted

in reckoning the population and to omit certain words relating to the Aboriginal race which some people felt were discriminatory. The proposed laws, after being passed by both Houses of Parliament, were submitted to the electors of the States at referendums held on 27 May 1967. At the referendums the electors voted in all States in favour of the proposal regarding Aboriginals, but rejected in all States but New South Wales the proposal for increasing the number of members of the House of Representatives. For a summary of the results of the voting on each of the proposals see Year Book No. 54, page 66.

Consequent upon obtaining the approval of the electors, an Act cited as the *Constitution Alteration (Aboriginals) Act 1967* was assented to on 10 August 1967. Section 51 of the Constitution was thereby altered by omitting from paragraph (xxvi) the words 'other than the aboriginal race in any State', and Section 127 of the Constitution was thereby repealed.

### The Parliaments of the States

This chapter contains summarised information on the Parliaments of each State, the numbers of Houses and members, and salaries payable. For greater detail, including some historical material, reference should be made to earlier Year Books, particularly No. 50, pages 69–72. Recent changes have been reported in successive issues of the Year Book.

*Membership of State Parliaments.* The following table shows the party distribution in each of the various State Parliaments at the beginning of 1972.

#### STATE PARLIAMENTS: MEMBERSHIP, BY PARTY AFFILIATION, 1 JANUARY 1972

Party	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.
UPPER HOUSE						
Australian Country Party (C.P.) .	12	8	..	..	7	..
Australian Labor Party (A.L.P.) .	26	9	..	4	10	2
Independent (Ind.) . . . . .	..	..	..	..	..	(a)17
Independent Labor (Ind. Lab.) .	4	..	..	..	..	..
Liberal and Country League (L.C.L.)	..	..	..	16	..	..
Liberal Party of Australia (L.P.) .	17	19	..	..	(b)13	..
Vacancy . . . . .	1(c)	..	..	..	..	..
<b>Total . . . . .</b>	<b>60</b>	<b>36</b>	<b>(d)</b>	<b>20</b>	<b>30</b>	<b>19</b>
LOWER HOUSE						
Australian Centre Party (A.C.P.) .	..	..	..	..	..	1
Australian Country Party (C.P.) .	17	8	24	..	8	..
Australian Labor Party (A.L.P.) .	45	22	30	27	26	17
Independent (Ind.) . . . . .	2	..	..	..	..	..
Independent Labor (Ind. Lab.) .	..	1	..	..	..	..
Liberal and Country League (L.C.L.)	..	..	..	20	..	..
Liberal Party of Australia (L.P.) .	32	42	19	..	(b)17	17
North Queensland Labor Party (N.Q.L.P.) . . . . .	..	..	1	..	..	..
Democratic Labor Party (D.L.P.) .	..	..	1	..	..	..
<b>Total . . . . .</b>	<b>96</b>	<b>73</b>	<b>(e)75</b>	<b>47</b>	<b>51</b>	<b>35</b>

(a) In Legislative Council elections only the A.L.P. normally endorses candidates. (b) Formerly Liberal and Country League, which changed its name on 15 July 1969 to the Liberal Party of Australia (Western Australian Division) Incorporated. (c) To be filled in March 1972. (d) Upper House abolished in 1922. (e) At 1 January 1972 three electorates were without representation owing to one resignation and deaths of two members. The vacancies are expected to be filled in April 1972.

The Australian Country Party; Queensland, and the Country Party of Western Australia are shown above as the Australian Country Party, since they are affiliated with the Federal body.

For corresponding particulars for the Commonwealth Parliament, see page 70.



## Number and salary of members of the legislatures, Australian Parliaments, January 1972

## AUSTRALIAN PARLIAMENTS: MEMBERS AND ANNUAL SALARIES, 1 JANUARY 1972

Members in—	Cwlth	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
NUMBER OF MEMBERS								
Upper House . .	60	60	36	(a)	20	30	19	225
Lower House . .	125	96	73	78	47	51	35	505
Total . .	185	156	109	78	67	81	54	730

ANNUAL SALARY (\$)								
Upper House . .	(b)9,500	(c)4,000	(d)9,300	(a)	(e)9,250	(f)10,000	(g)7,200	..
Lower House . .	(b)9,500	(h)11,500	(d)9,300	(i)9,690	(e)9,250	(f)10,000	(g)7,200	..

(a) Abolished in 1922. (b) Plus expense allowances—Senators, \$2,750; Members of the House of Representatives, city electorates, \$2,750, country electorates, \$3,350. Certain additional allowances are also provided for holders of parliamentary offices, etc. (c) Plus allowance of \$2,000. An additional \$20 per day is payable to members who live outside the metropolitan area. (d) Plus allowances from \$2,400 for metropolitan to \$2,875 for urban, \$3,350 for inner country, and \$3,725 for outer country electorates. (e) Plus an allowance varying from \$1,500 to \$3,200 according to location of electorate. (f) Plus expense reimbursement ranging from \$2,000 for a metropolitan member to \$4,100 for a north province member. (g) Plus allowance according to area of electorate and distance from the capital varying from \$650 to \$1,475 in the case of the Legislative Council, and from \$1,100 to \$2,500 in the case of the House of Assembly. (h) Plus allowance varying from \$2,750 to \$4,100 according to location of electorate. (i) Plus individual electoral allowances ranging from \$1,600 to \$3,810.

## Outlay on parliamentary government

The table below shows, in broad groups, the expenditure incurred in the operation of the parliamentary system in Australia, comprising the Governor-General and Governors, the Ministries, the Upper and Lower Houses of Parliament, and electoral activities; it does not attempt to cover the expenditure on Commonwealth and State administration generally. Only broad groups are shown, but even these are not entirely comparable because of differences in accounting procedures and in the presentation of accounts. Expenditure under the head of Governor-General or Governor includes salaries of Government House staffs and maintenance of residences, official establishments, grounds, etc., and expenditure on capital works and services.

## OUTLAY ON PARLIAMENTARY GOVERNMENT, 1970-71

(\$'000)

Expenditure group	Cwlth	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
Governor-General or Governor(a)	542	243	238	172	207	122	158	1,682
Ministry(b)	692	380	146	163	155	218	235	1,989
Parliament—								
Upper House(c)	895	312	440	..	176	321	171	2,316
Lower House(c)	1,935	965	862	810	416	464	251	5,704
Both Houses(d)	4,781	1,285	1,495	635	815	732	237	9,981
Miscellaneous(e)	3,998	363	152	96	105	43	80	4,838
Total, Parliament	11,611	2,924	2,949	1,542	1,513	1,560	740	22,838
Electoral(f)	4,874	751	357	199	361	403	92	7,038
Royal Commissions, Select Committees, etc	346	..	193	6	121	2	25	692
Grand Total	18,064	4,299	3,883	2,082	2,356	2,305	1,249	34,239

(a) Salaries and other expenses, including maintenance of house and grounds. (b) Salaries, travelling and other expenses as ministers. (c) Allowances to members (including ministers' salaries as members), travelling and other expenses. (d) Government contribution to members' superannuation funds, printing, reporting staff, library, etc. (e) Services, furniture, stores, etc. (f) Salaries, cost of elections, etc.

## OUTLAY ON PARLIAMENTARY GOVERNMENT, 1966-67 TO 1970-71

Year	Cwth	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
TOTAL (\$'000)								
1966-67	12,140	3,105	2,489	1,609	1,540	1,408	805	23,096
1967-68	12,457	3,379	2,297	1,590	1,568	1,800	929	24,020
1968-69	13,047	3,163	2,688	2,048	1,581	1,766	1,063	25,356
1969-70	15,602	4,062	3,349	1,974	1,757	1,889	1,035	29,668
1970-71	18,064	4,299	3,883	2,082	2,356	2,305	1,249	34,239

PER HEAD OF POPULATION  
(\$)

1966-67	1.04	0.73	0.77	0.95	1.39	1.63	2.15	1.97
1967-68	1.04	0.78	0.70	0.93	1.40	2.02	2.45	2.01
1968-69	1.07	0.71	0.79	1.16	1.38	1.87	2.74	2.08
1969-70	1.25	0.90	0.98	1.11	1.52	1.96	2.65	2.38
1970-71	1.43	0.94	1.12	1.15	2.02	2.28	3.21	2.71

## Commonwealth Government Departments

In Year Book No. 49 (pages 87-98) a list appears of the Commonwealth Government Departments, giving particulars of each Department, as at the end of 1962, of the principal matters dealt with and the Acts administered by the Minister concerned. Changes made during 1963 and 1966 are shown, respectively, on page 83 of Year Book No. 50 and page 74 of Year Book No. 53. Changes made during 1968 are shown in the Appendix to Year Book No. 54 (pages 1276-7). For detailed information on the Acts administered, the functions and the organisation of the Departments and Agencies of the Commonwealth Government see the *Commonwealth Directory* (latest issue 1972).

## Enactments of the Parliaments

In the Commonwealth all laws are enacted in the name of the Sovereign, the Senate, and the House of Representatives. The subjects with respect to which the Commonwealth Parliament is empowered to make laws are enumerated in the Constitution. In the States other than South Australia and Tasmania laws are enacted in the name of the Sovereign by and with the consent of the Legislative Council (except in Queensland) and Legislative Assembly. In South Australia and Tasmania laws are enacted in the name of the Governor of the State, with the advice and consent of the Parliament in the case of South Australia, and of the Legislative Council and House of Assembly in the case of Tasmania. Generally, assent to Bills passed by the legislatures is given by the Governor-General or State Governor acting on behalf of, and in the name of, the Sovereign. In certain special cases Bills are reserved for the Royal assent. The Parliaments of the States are empowered generally, subject to the Commonwealth Constitution, to make laws in and for their respective States in all cases whatsoever. Subject to certain limitations they may alter, repeal, or vary their Constitutions. Where a law of a State is inconsistent with a law of the Commonwealth the latter prevails, and the former is to the extent of the inconsistency invalid.

## The course of Commonwealth legislation

The actual legislation by the Commonwealth Parliament during 1971 is indicated in alphabetical order in *The Acts of the Parliament of the Commonwealth of Australia passed during the year 1971 in the Second Session of the Twenty-seventh Parliament of the Commonwealth, with Appendix, Tables and Index*. A chronological table of Acts passed from 1901 to 1971 showing how they are affected by subsequent legislation or lapse of time is also given, and, further, a table of Commonwealth legislation passed from 1901 to 1971 in relation to the several provisions of the Constitution is furnished in the same volume. Reference should be made to these for complete information.

The Acts passed by the Commonwealth Parliament during the year 1971 are listed on pages 77–82. In many cases the title of the Act indicates the general scope of the Act, but brief explanatory notes have been added where necessary. Appropriate chapters of this Year Book should be referred to for further information which may be available there.

The following figures indicate the variation over the years in the number of enactments of the Commonwealth Parliament since 1901. Seventeen Acts were passed in 1901, 36 in 1914, 38 in 1927, 87 in 1939, 109 in 1952, 156 in 1965, 157 in 1968, 126 in 1970 and 137 in 1971.

#### *Commonwealth legislation passed during 1971*

*Air Accidents (Commonwealth Liability) Act* 1971 (No. 50) amended the *Air Accidents (Commonwealth Liability) Act* 1963–1970 consequent upon the *Compensation (Commonwealth Employees) Act* 1971.

*Air Navigation Act* 1971 (No. 79) gave approval for Australia to ratify a protocol adopted by the International Civil Aviation Organisation which amended article 50(a) of the Chicago Convention to increase the number of Council members from 27 to 30, and also amended section 6 of the *Air Navigation Act* 1920–1966.

*Anglo-Australian Telescope Agreement Act* 1971 (No. 51) amended the *Anglo-Australian Telescope Agreement Act* 1970 consequent upon the *Compensation (Commonwealth Employees) Act* 1971.

*Apple and Pear Organization Act* 1971 (No. 84) amended the *Apple and Pear Organization Act* 1938–1966 in certain respects.

*Apple and Pear Stabilization Act* 1971 (No. 81) implemented a scheme for the stabilisation of returns to apple and pear growers for a period of five years commencing with the 1971 crop.

*Apple and Pear Stabilization Export Duty Act* 1971 (No. 82) imposed export duty under certain conditions on apples and pears exported on consignment.

*Apple and Pear Stabilization Export Duty Collection Act* 1971 (No. 83) provided the machinery arrangements for the payment and collection of provisional export duty payable under the *Apple and Pear Stabilization Export Duty Act* 1971.

*Appropriation Act* (No. 3) 1971 (No. 23).

*Appropriation Act* (No. 4) 1971 (No. 24).

*Appropriation Act* (No. 1) 1971 (No. 118).

*Appropriation Act* (No. 2) 1971 (No. 119).

*Appropriation Act* (No. 3) 1971–1972 (No. 125).

*Australian Capital Territory Evidence (Temporary Provisions) Act* 1971 (No. 66) continued the provisions of the *Australian Capital Territory Evidence Ordinance* 1971 until 31 March 1972.

*Australian Capital Territory Supreme Court Act* 1971 (No. 13) amended the *Australian Capital Territory Supreme Court Act* to provide for the appointment of a second judge under subsection (1.) of section 7 of that Act.

*Australian Capital Territory Supreme Court Act No. 2* 1971 (No. 98) fixed the retirement age for judges of the court at age seventy (previously a life appointment), and provided for the appointment of a third judge.

*Australian Commission on Advanced Education Act* 1971 (No. 116) created a statutory body to advise on balanced development of advanced education in Australia.

*Australian National University Act* 1970 (No. 1) amended the *Australian National University Act* 1946–1970 to increase the size of the council from thirty-eight to forty-one members.

*Australian Universities Commission Act* 1971 (No. 117) increased to two the number of full-time members of the Commission.

*Bills of Exchange Act* 1970 (No. 4) amended the *Bills of Exchange Act* 1909–1970 relating to cheques and bank drafts so that it is no longer necessary to endorse on order cheques and bank drafts paid into the account of the payee.

*Broadcasting and Television Act* 1971 (No. 8) provided changes affecting the financial operation of the Australian Broadcasting Commission and the Australian Broadcasting Control Board; it also changed some of the existing provisions regarding ownership and control of broadcasting and television stations and extended broadcast listeners' and television viewers' licences concessions to several additional small groups of pensioners.

*Broadcasting and Television Act* (No. 2) 1971 (No. 72) increased, except for pensioners, broadcast listeners' and television viewers' licence fees.



*Commonwealth legislation passed during 1971—continued*

*Cellulose Acetate Flake Bounty Act* 1971 (No. 7) amended the *Cellulose Acetate Flake Bounty Act* 1956–1970 and extended the bounty payment at the same rates until 31 December 1973.

*Compensation (Commonwealth Employees) Act* 1971 (No. 48) established a new code of workers compensation for Commonwealth employees.

*Criminology Research Act* 1971 (No. 15) established facilities on a national level for the conduct of research into crime and for the training of persons engaged in the prevention and control of criminal behaviour.

*Customs Act* 1971 (No. 12).

*Customs Act (No. 2)* 1971 (No. 134).

*Customs Tariff Act* 1971 (No. 38).

*Customs Tariff Act (No. 2)* 1971 (No. 107).

*Customs Tariff Act (No. 3)* 1971 (No. 109).

*Customs Tariff Validation Act* 1971 (No. 45).

*Customs Tariff Validation Act (No. 2)* 1971 (No. 124).

*Defence Forces Retirement Benefits Act (No. 2)* 1970 (No. 47) amended the *Defence Forces Retirement Benefits Act* 1948–1970 to give effect to the Government's proposals for the preservation of superannuation rights.

*Defence Forces Retirement Benefits (Pension Increases) Act* 1971 (No. 74) provided increases to ex-servicemen, their widows, certain orphan pensioners, invalidity pensioners, and those persons contributing under the Superannuation Act in 1948 immediately prior to being transferred to the Defence Forces Retirement Benefits Fund.

*Defence Pay Act* 1971 (No. 2) validated certain payments made to members of the three services during the period 1 April 1961 to 4 February 1966 and to civilians employed under the *Naval Defence Act* 1910–1952 during the period 1 April 1961 to 18 June 1969.

*Diesel Fuel Tax Act (No. 1)* 1971 (No. 105) varied the rate of tax to be collected on diesel fuel which is sold or disposed of to a person who is not the holder of a certificate and is therefore not entitled to concessional treatment.

*Diesel Fuel Tax Act (No. 2)* 1971 (No. 106) varied the rate of tax on diesel fuel used in propelling a road vehicle on a public road.

*Dried Fruits Levy Act* 1971 (No. 19) authorised the imposition of a dried fruits levy to be used to finance a dried fruits research scheme.

*Dried Fruits Levy Collection Act* 1971 (No. 20) provided the machinery necessary for the collection of the levy on dried fruits imposed by the *Dried Fruits Levy Act* 1971.

*Dried Fruits Research Act* 1971 (No. 21) provided for the establishment and operation of a joint Commonwealth/Industry research scheme for the Australian dried fruit industry.

*Dried Vine Fruits Levy Act* 1971 imposed a levy, under certain conditions on dried vine fruits.

*Dried Vine Fruits Levy Collection Act* 1971 (No. 132) provided the machinery arrangements for the payment and collection of the levy imposed by the *Dried Vine Fruits Levy Act* 1971.

*Dried Vine Fruits Stabilization Act* 1971 implemented a scheme for the stabilisation of returns to dried vine fruit growers for a period of 5 years beginning with the 1971 crop.

*Export Incentive Grants Act* 1971 (No. 110) provided for the continuation of the incentives to exporters, formerly provided under the Commonwealth payroll tax rebate scheme.

*Export Payments Insurance Corporation Act* 1971 (No. 33) amended the *Exports Payments Insurance Corporation Act* 1956–1970 so that the maximum contingent liability which the corporation may accept under contracts of export payments insurance and under guarantee be increased from \$300m to \$500m.

*Export Payments Insurance Corporation Act (No. 2)* 1971 (No. 91) broadened the insurance and guarantee provisions of the *Export Payments Insurance Corporation Act* 1956–1971 and introduced a new export financing facility known as buyers' credit.

*Excise Tariff Act* 1971 (No. 108) increased duties on manufactured tobacco products and certain refined petroleum products.

*Homes Savings Grant Act* 1971 (No. 112) provided for the payment of a grant of moneys to assist certain eligible persons who are purchasing or building their own homes.

*Immigration (Education) Act* 1971 (No. 3) provided legislative basis for the comprehensive programme of migrant education under three main headings: the adult programme, intensive courses and child migrant education.

*Commonwealth legislation passed during 1971—continued**Income Tax Act 1971 (No. 92)**Income Tax Assessment Act 1971 (No. 6)**Income Tax Assessment Act (No. 2) 1971 (No. 54)**Income Tax Assessment Act (No. 3) 1971 (No. 93)**Income Tax (Bearer Debentures) Act 1971 (No. 55)**Income Tax (Withholding Tax Recoupment) Act 1971 (No. 56)*

*International Development Association (Further Payment) Act 1971 (No. 34)* obtained Parliamentary approval for payment to the International Development Association of a sum not exceeding the equivalent of \$US48m in connection with the third replenishment of the resources of that institution.

*International Tin Agreement Act 1971 (No. 31)* ratified the Fourth International Tin Agreement.

*International Wheat Agreement Act 1971 (No. 39)* ratified the Wheat Trade Convention and the Food Aid Convention of the International Wheat Agreement 1971.

*Judicial Appointment (Fiji) Act 1971 (No. 137)* made available to Fiji a judge of the Commonwealth Industrial Court of Australia to the Office of Chief Justice of Fiji for a period of four years.

*Livestock Slaughter Levy Act 1971 (No. 87)* extended the period of operation of the *Livestock Slaughter Levy Act 1964–1968* for a further three years to 31 December 1974.

*Loan Act 1971 (No. 36)* obtained authority to borrow from the Reserve Bank an amount necessary to complete the financing of the Budget deficit of 1970–71 and to provide for additional defence expenditure.

*Loan (Australian Wheat Board Act) 1971 (No. 11)* enabled the Commonwealth to meet its obligation under a guarantee of repayment of certain borrowings by the Australian Wheat Board from the Reserve Bank of Australia.

*Loan (Defence) Act 1971 (No. 103)* approved a borrowing by the Commonwealth of up to \$US90m from the Export–Import Bank of the United States of America to assist in financing the purchase of general defence equipment.

*Loan (Farmers' Debt Adjustment) Act 1971 (No. 62)* amended the *Loan (Farmers' Debt Adjustment) Act 1935–1950* to enable funds available to the States arising from that Act to be used for the same purpose as the funds to be provided by the Commonwealth under the *States Grants (Rural Reconstruction) Act 1971*.

*Loans (Qantas Airways Limited) Act 1971 (No. 35)* approved the borrowings by the Commonwealth Government from the Export–Import Bank of the United States of America, the Boeing Company and a syndicate of United States commercial banks to assist in financing the purchase of jet aircraft and related equipment by Qantas Airways Limited.

*Loans (Qantas Airways Limited) Act (No. 2) 1971 (No. 94)* approved borrowing by the Commonwealth to assist Qantas Airways Limited in financing the purchase of not more than two Boeing 747 jet aircraft and related equipment, spare parts and services.

*Loan (War Service Land Settlement) Act 1971 (No. 121)* raised loan moneys amounting to \$4m for war service land settlement in the States of South Australia, Western Australia and Tasmania during the 1971–72 financial year.

*Matrimonial Causes Act 1971 (No. 102)* amended the *Matrimonial Causes Act 1959* by clarifying the position in relation to Supreme Court Officers' rulings.

*Minister of State Act 1971 (No. 43)* authorised an increase of one in the number of Ministers.

*National Health Act 1971 (No. 85)* increased the contribution payable for pharmaceutical benefits from 50c to \$1.00 and incorporated in the schedules of the *National Health Act 1953–1971* variations made by regulation during 1971.

*National Service Act 1971 (No. 80)* gives effect to the Government's decision to reduce the period of full-time national service from 2 years to 18 months.

*Naval Defence Act 1971 (No. 14)* amended the *Naval Defence Act 1910–1968* enabling the Australian Sea Cadets Corps and the Naval Reserve Cadets to be amalgamated.

*New South Wales Grant (Flood Mitigation) Act 1971 (No. 10)* granted to the State of New South Wales up to \$9m, under the national water resources development programme, for assistance with flood mitigation works on eleven N.S.W. coastal rivers.

*Commonwealth legislation passed during 1971—continued*

*New South Wales Grant (Leeton Co-operative Cannery Limited) Act* 1971 (No. 128) provided financial assistance to the State of New South Wales to the extent of \$874,000 to be advanced to the Leeton Co-operative Cannery Limited.

*Northern Territory Railway Extension Act* 1971 (No. 25) provided for the construction by Commonwealth Railways of a new single spur railway line from Knuckey's Lagoon on the North Australia Railways to the east arm of Darwin Harbour.

*Northern Territory Supreme Court Act* 1971 (No. 99) fixed the retirement age for judges at age seventy (previously a life appointment) and provided for the appointment of another judge.

*Overseas Telecommunications Act* 1970 (No. 9) amended the financial provisions of the *Overseas Telecommunications Act* 1964–1968 to provide for the implementation of revised financial arrangements between the Commonwealth and the Overseas Telecommunications Commission (Australia) from 1 April 1970, and amended that section of the Act relating to retirement conditions.

*Papua New Guinea Act* 1971 (No. 58) increased the number of elected members of the House of Assembly for the Territory of Papua New Guinea and enacted certain consequential provisions.

*Papua New Guinea Act* 1971 (No. 123) ratified certain proposals for the Papua New Guinea Select Committee on Constitutional Development.

*Papua New Guinea Loan (International Bank) Act* 1971 (No. 27) obtained the approval of Parliament to the guarantee by the Commonwealth of a \$20.7m borrowing by the Administration of the Territory of Papua New Guinea from the International Bank for Reconstruction and Development.

*Parliamentary Retiring Allowances (Increase) Act* 1971 (No. 75) increased the parliamentary and ministerial pensions payable under the *Parliamentary Retiring Allowances Act* 1948–1968.

*Pay-Roll Tax (State Taxation of Commonwealth Authorities) Act* 1971 (No. 104) made liable to State pay-roll tax sixteen Commonwealth Authorities that have in the past been subject to Commonwealth pay-roll tax.

*Pay-Roll Tax (Termination of Commonwealth Tax) Act* 1971 (No. 76) ratified a protocol adopted at the June Premiers' Conference 1971, for the transfer of pay-roll tax to State Governments.

*Pay-Roll Tax (Territories) Act* 1971 (No. 78) imposed the pay-roll tax payable by employees in the Commonwealth Territories at the rate of 2½ per cent of the wages subject to tax under the *Pay-Roll Tax (Territories) Assessment Act* 1971.

*Pay-Roll Tax (Territories) Assessment Act* 1971 (No. 77) ratified a protocol of the June Premiers' Conference, for the Commissioner of Taxation to be responsible for the administration, assessment and collection of pay-roll tax in the Commonwealth Territories.

*Phosphate Fertilisers Bounty Act* 1971 (No. 86) extended the *Phosphate Fertilisers Bounty Act* 1963–1969 for a further three years to 31 December 1974.

*Pig Industry Research Act* 1971 (No. 30) provided for the establishment and operation of a joint Commonwealth-Industry research scheme for the Australian pig industry.

*Pig Slaughter Levy Act* 1971 (No. 28) authorised the imposition of a levy on all pigs slaughtered for human consumption.

*Pig Slaughter Levy Collection Act* 1971 (No. 29) provided the machinery necessary for the collection of the levy imposed by the *Pig Slaughter Levy Act* 1971

*Post and Telegraph Act* 1971 (No. 70) introduced certain changes in postal conditions and charges.

*Post and Telegraph Rates Act* 1971 (No. 71) amended the *Post and Telegraph Rates Act* 1902–1970 to allow for a basic charge adjustment.

*Public Order (Protection of Persons and Property) Act* 1971 (No. 26) repealed the State and Territory Offences of taking part in an unlawful assembly, rout and riot, and replaced, created and provided summary and other offences and penalties so far as these laws affect the Commonwealth Territories, Commonwealth premises and consular premises and personnel.

*Pyrates Bounty Act* 1971 (No. 96) extended the operation of the *Pyrates Bounty Act* 1960–1970 until 31 May 1972.

*Railway Agreement (Tasmania) Act* 1971 (No. 101) approved a Commonwealth contribution of up to \$4.25m towards the cost of a new railway link between Launceston and Bell Bay to meet woodchip export commitments.



*Commonwealth legislation passed during 1971—continued*

*Railway Agreement (Western Australia) Act* 1971 (No. 88) amended the *Railway Agreement (Western Australia) Act* 1961 by removing the time limitation on Commonwealth contributions towards expenditure by the Western Australia Government on the railway standardisation works in that State.

*Repatriation Act* 1971 (No. 17) increased: the T.P.I. and double amputees rates of pension by \$1.00 to \$39.00 per week, the intermediate rate by 50c to \$28.50 per week and the war widows pension by 50c per week.

*Repatriation Act* (No. 2) 1971 (No. 68) increased payments to certain categories of war pensioners, their dependants and orphans covered by the Act.

*Salaries Act* 1971 (No. 22) provided for a 6 per cent increase in salaries of statutory officeholders.

*Salaries (Statutory Offices) Adjustment Act* 1971 (No. 136) made provision for an increase in salary for all Commonwealth Statutory Offices.

*Seamen's Compensation Act* 1971 (No. 52) increased various rates and amounts of workers' compensation payable in respect of seamen and their dependants under the *Seamen's Compensation Act* 1911-1971.

*Seamen's War Pensions and Allowances Act* 1971 (No. 18) brought the Seamen's War pensions into line with other rates of pensions and allowances payable under the *Repatriation Act* 1971.

*Seamen's War Pensions and Allowances Act* (No. 2) 1971 (No. 69) raised, in relation to seamen, various rates of pensions and allowances in line with corresponding rates under the *Repatriation Act* (No. 2) 1971.

*Social Services Act* 1971 (No. 16) increased the basic standard rate of pension for the aged, invalid and widowed by 50c per week to bring the new rate to \$16.00 per week.

*Social Services Act* (No. 2) 1971 (No. 67) increased the rate of pension for the aged, invalid and widowed, and increased child endowment, sickness benefits and the allowance for wives and children of pensioners and beneficiaries.

*South Australia Grant (Fruit Canneries) Act* 1971 (No. 127) provided financial assistance to the State of South Australia to make moneys available to certain fruit canneries.

*States Grants Act* 1971 (No. 64).

*States Grants Act* (No. 2) 1971 (No. 135).

*States Grants (Aboriginal Advancement) Act* 1971 (No. 130).

*States Grants (Advanced Education) Act* 1971 (No. 113).

*States Grants (Capital Assistance) Act* 1971 (No. 129).

*States Grants (Housing) Act* 1971 (No. 111).

*States Grants (Housing Assistance) Act* 1971 (No. 40).

*States Grants (Pre-school Teachers Colleges) Act* 1971 (No. 32).

*States Grants (Rural Reconstruction) Act* 1971 (No. 61).

*States Grants (Science Laboratories) Act* 1971 (No. 65).

*States Grants (Secondary Schools Libraries) Act* 1971 (No. 114).

*States Grants (Special Assistance) Act* 1971 (No. 122).

*States Grants (Technical Training) Act* 1971 (No. 37).

*States Grants (Universities) Act* 1971 (No. 44).

*States Grants (Universities) Act* (No. 2) 1971 (No. 115).

*Stevedoring Industry Act* 1971 (No. 100) amended the *Stevedoring Industry Act* 1956-1966 by according recognition of the Waterside Workers Federation as the appropriate union in the Port of Darwin.

*Stevedoring Industry Charge Act* 1971 (No. 59) amended the *Stevedoring Industry Charge Act* 1947-1967 to permit the charge to be imposed at rates up to \$1.00, \$1.75 and \$1.20 per man-hour for classes A, B and C waterside workers respectively.

*Stevedoring Industry Charge Assessment Act* 1971 (No. 60) amended the *Stevedoring Charge Assessment Act* 1947-1967 to provide for a conversion of the charge for class A waterside workers from a man-week basis to a man-hour basis.

*Commonwealth legislation passed during 1971—continued*

*Sugar Agreement Act* 1970 (No. 5) approved an Agreement made between the Commonwealth and Queensland Governments to regulate the production and marketing of sugar within the Commonwealth for a period of 5 years from 1 July 1969.

*Sulphuric Acid Bounty Act* 1971 (No. 95) extended the operation of the *Sulphuric Acid Bounty Act* 1954–1970 until 31 May 1972.

*Superannuation Act* 1971 (No. 46) amended the *Superannuation Act* 1922–1969 to extend preservation to the two retirement benefits schemes established under that Act, i.e. the Superannuation Fund and the Provident Account.

*Superannuation (Pension Increases) Act* 1971 (No. 73) increased pensions payable under the *Superannuation Act* 1922–1971 as determined by the notional salary method.

*Supply Act* (No. 1) 1971–1972 (No. 41).

*Supply Act* (No. 2) 1971–1972 (No. 42).

*Supply Act* (No. 3) 1971–1972 (No. 90).

*Tariff Board Act* 1971 (No. 126) increased the Board membership from 8 to 9 and gave the chairman authority to appoint single member divisions of the Board.

*Trade Practices Act* 1971 (No. 57) amended the *Trade Practices Act* 1965–1969 in relation to the practice known as resale price maintenance.

*United States Naval Communication Station (Civilian Employees) Act* 1971 (No. 49) made certain amendments and provisions to the *United States Naval Communication Station (Civilian Employees) Act* 1968.

*Victoria Grant (Shepparton Preserving Company Limited) Act* 1971 (No. 63) provided financial assistance to the State of Victoria so that the State could assist the Shepparton Preserving Company Limited in the matter of the company's payment to growers for fruit delivered to the company.

*War Services Homes Act* 1971 (No. 120) increased the maximum loan under the scheme from \$8,000 to \$9,000.

*Western Australia (South-West Region Water Supplies) Agreement Act* 1971 (No. 97) raised the upper limit on the Commonwealth's financial assistance payable under the Act from \$10.5m to \$12m thus providing assistance on a dollar-for-dollar basis with State expenditure.

*Wool (Deficiency Payments) Act* 1971 (No. 89) ratified a scheme of deficiency payments to give wool growers an assured income during the 1971–1972 season.

*Wool Industry Act* 1971 (No. 53) enabled the Commonwealth Government to guarantee the amounts of loans and the payment of interest on amounts that may be borrowed by the Australian Wool Board for the construction and equipping of integrated wool selling complexes.

**TOTAL FOR YEAR: 137 Acts.**

## CHAPTER 4

### DEFENCE

#### Department of Defence

##### Functions of the Department of Defence

In general the functions of the Department of Defence include all aspects of defence policy, joint Service matters and matters having an inter-departmental defence aspect. More particularly the functions of the Department and associated inter-Service and departmental machinery include strategic appreciations, national intelligence assessments and strategic intelligence reports; defence planning and deployment of Australian Forces; formulation of defence policy objectives; military advice to the Minister for Defence; planning and control of joint military operation; defence programming and disposition of resources to manning, equipment, supplies and works for the Defence Forces; supervision of estimates, allocation of funds among Departments of the Defence group, and control of expenditure; scientific advice and formulation of defence research and development policy; formulation of defence group policies relating to defence industry and to matériel procurement and reserves; rationalisation of Service activities and co-ordination of their policies; review of implementation by the Services of defence policies; financial and other common conditions of service in the Defence Forces; higher appointments in the Defence Forces; Defence and Service advisers abroad; general policy and technical direction of the Services electronic data processing project and the further development and application of E.D.P.; and management of joint service and inter-departmental machinery engaged in above matters.

##### Organisation, higher defence machinery, and the control of the joint Service machinery

The following are the principal committees of the joint service and inter-departmental advisory machinery within the Department.

The *Defence Committee* is a statutory body consisting of the Secretary, Department of Defence, who is Chairman; the Chairman of the Chiefs of Staff Committee; the Chiefs of Staff of the three Services; the Secretary, Department of the Prime Minister and Cabinet; the Secretary, Department of Foreign Affairs; and the Secretary to the Treasury. Its function is to advise the Minister for Defence on: the defence policy as a whole and the co-ordination of military, strategic, economic, financial, and foreign affairs aspects of defence policy; matters of policy or principle and important questions having a joint Service or an inter-departmental defence aspects; and such other matters having a defence aspect as are referred to the Committee by or on behalf of the Minister for Defence.

The *Chiefs of Staff Committee* is responsible to the Minister for Defence for professional military advice; preparation of military appreciations and plans; control of joint military operations through designated commanders, and direction and co-ordination of related activities; the exercise of executive functions for the control and administration of special forces of a multi-national nature, the responsibility for which is assigned to the Australian Government; recommending the allocation of resources to joint Service Forces in the field; the exercise of executive functions for the control of joint Service (Military) establishments and organisations; the control and co-ordination of joint Service military training and exercises; the development of joint warfare doctrine; and the development of joint operational requirements.

The *Defence Force Development Committee* consists of the Secretary, Department of Defence (Chairman), the Chairman of the Chiefs of Staff Committee, and the Chiefs of Staff of the three Services. It is responsible for advice to the Minister for Defence on: the development of the Defence Forces as a whole; the inclusion in the five year rolling programme of major weapons and equipment capabilities; initiation and review of major studies concerned with the development of the Defence Forces; and review of matters of common interest to members and of progress in the preparation of proposals and appreciations for submission to the Government.

The *Defence Administration Committee* consists of the Secretary, Department of Defence (Chairman), the Chairman of the Chiefs of Staff Committee, the Chiefs of Staff of the three Services, the Secretaries of the three Service Departments and the Department of Supply and a representative of the Treasury. Its functions are to review the progress of the Defence Programme; consider reports of the Defence (Industrial) Committee; consider priority listing of works projects and programmes;



consider variations in bases of provisioning and scales of rations, clothing, etc.; consider variations in scales and standards of accommodation; and exercise overall control of the Defence Vote.

The *Defence (Industrial) Committee* co-ordinates and makes recommendations regarding the capabilities of Australian industry to meet the matériel requirements of the Services in peace and war. Members of the Defence Business Board are co-opted as necessary for specific subjects. The *Defence Business Board* is constituted to advise on business matters of common interest to the three Services, or important subjects on which the collective advice of the Board is desired from the business aspect, with a view to promoting efficiency and economy in the execution of the Defence Programme. The Board comprises businessmen who serve in a part-time honorary capacity. Three of the members also serve as business advisers to the separate Service Departments.

Far-reaching changes have been made in defence administration over the last few years, designed to provide the Government with the best possible advice in making decisions on defence policy by ensuring that all proposals have been thoroughly examined and that the best available military, strategic, technological, intelligence and economic advice is provided. These changes include the establishment of a Joint Staff, the strengthening of the Defence Science Organisation, the establishment of a Joint Intelligence Organisation, strengthening of the Programme Management and Defence Facilities Division and other areas of the Department to provide greater capacity, the introduction of systems analysis and the introduction of the five year rolling programme system based on the concepts of planning-programming-budgeting.

### Basis of current defence policy

The primary aim of Australian defence policy is to ensure the security of Australia and her Territories.

Because of the close links between Australian security and wider regional security, Australian policy stresses not only immediate direct defence, but also progress and stability in nearby countries, particularly in the South-East Asian area. In concert with our major allies and in keeping with our resources, Australia continues to make an active contribution to the collective defence arrangements in the area—SEATO, ANZUS and the Five-Power arrangements in Malaysia and Singapore—with the aim of supporting secure and stable independent nation States in South-East Asia with which Australia can establish co-operative relations.

During the past year, the withdrawal of Australian Combat Forces from the Republic of Vietnam was completed. Other forms of assistance continue however, including an Australian Army assistance group of 150 personnel in advisory and training roles.

Australia has long-standing defence links with Malaysia and Singapore. As a contribution to the Five-Power arrangements which were formally inaugurated in November 1971, Australia along with New Zealand and the United Kingdom, maintains forces of all arms in the area.

### Personnel strengths

The selective national service scheme is in its seventh year of operation and continues to be essential for the maintenance of Army strength. Of the estimated Army strength at June, 1972, some 11,600 will be national servicemen. The reduction in the strength of the national service element takes into consideration the Government's decision to reduce the period of full-time duty from 24 months to 18 months.

### PERSONNEL STRENGTHS OF DEFENCE FORCES, JUNE 1962 TO 1972

#### NAVY

<i>Strength at June—</i>	<i>Permanent Forces</i>	<i>Citizen Forces</i>	<i>Emergency Reserves</i>	<i>Total</i>
1962. . . . .	11,103	6,424	..	17,527
1963. . . . .	11,663	5,433	..	17,096
1964. . . . .	12,569	5,202	..	17,771
1965. . . . .	13,503	3,762	443	17,708
1966. . . . .	14,714	3,797	686	19,197
1967. . . . .	15,893	3,931	793	20,617
1968. . . . .	16,454	4,047	904	21,405
1969. . . . .	16,943	3,971	1,114	22,028
1970. . . . .	17,304	4,462	897	22,663
1971. . . . .	17,232	5,093	918	23,243
Estimated strength at June 1972 . . . . .	17,459	4,590	1,200	23,249

**PERSONNEL STRENGTHS OF DEFENCE FORCES**  
JUNE 1962 TO 1972—*continued*

**ARMY**

<i>Permanent Forces</i>					
<i>Strength at June—</i>	<i>Australian Regular Army</i>	<i>Pacific Islands Regiment</i>	<i>Citizen Forces</i>	<i>Emergency Reserves</i>	<i>Total</i>
1962 . . . . .	20,985	638	30,041	..	51,664
1963 . . . . .	21,944	695	27,341	..	49,980
1964 . . . . .	22,681	812	27,505	..	50,998
1965 . . . . .	25,314	1,415	28,146	288	55,163
1966 . . . . .	32,702	1,732	32,046	662	67,142
1967 . . . . .	41,464	2,246	34,670	889	79,269
1968 . . . . .	42,944	2,406	35,762	1,031	82,143
1969 . . . . .	44,051	2,474	34,256	981	81,762
1970 . . . . .	44,533	2,434	31,397	822	79,186
1971 . . . . .	43,769	2,593	29,364	657	76,383
Estimated strength at June 1972 . . . . .	39,800	2,680	27,200	600	70,280

**AIR FORCE**

<i>Strength at June—</i>	<i>Permanent Forces</i>	<i>Citizen Forces</i>	<i>Emergency Reserves</i>	<i>Total</i>
1962 . . . . .	15,815	765	..	16,580
1963 . . . . .	15,840	788	..	16,628
1964 . . . . .	16,564	926	..	17,490
1965 . . . . .	17,720	724	26	18,470
1966 . . . . .	19,358	865	170	20,393
1967 . . . . .	20,130	1,059	303	21,492
1968 . . . . .	21,564	907	397	22,868
1969 . . . . .	22,712	902	467	24,081
1970 . . . . .	22,642	841	668	24,151
1971 . . . . .	22,539	788	700	24,027
Estimated strength at June 1972 . . . . .	22,769	778	700	24,247

**Equipment**

An amount of \$144.4 million was spent on equipment of a capital nature in 1970-71; this included \$37.6 million under credit arrangements with the Government of the United States of America. An amount of \$173.4 million is expected to be spent in 1971-72 of which \$41.8 million will be under the credit arrangements with the United States of America.

The major equipment items received in 1970-71 by the Services included: ship (1 River Class destroyer escort); aircraft (24 Phantom F4E leased from the United States Air Force, 11 Macchi, 3 Pilatus Porter, 7 helicopters); and a large quantity of military vehicles and equipment.

Major new equipment items planned for delivery in 1971-72 include 10 Skyhawk and 12 Macchi aircraft, 12 helicopters, 149 M113 tracked carriers and a wide range of other equipment.

**Research and development**

The laboratories of the Department of Supply together with the Services' own technical establishments, have continued to work on projects and investigations in support of Service needs. A new agreement with the United Kingdom has been negotiated for the conduct of the Woomera Range and its associated technical facilities, and collaborative programmes in space tracking and other selected topics have been arranged with the United States of America.

## Defence expenditure

DEFENCE EXPENDITURE BY DEPARTMENT OR SERVICE 1966-67 TO 1971-72  
(\$'000)

	Defence (a)	Navy	Army	Air	Supply	Other	Total
Actual expenditure—							
1966-67 . . . . .	18,081	202,607	352,837	281,011	80,312	15,240	950,088
1967-68 . . . . .	17,492	223,492	381,019	378,615	90,038	18,877	1,109,533
1968-69 . . . . .	19,077	232,327	410,621	382,559	90,482	29,631	1,164,697
1969-70 . . . . .	23,440	241,140	409,386	301,162	94,091	33,841	1,103,060
1970-71—							
Total . . . . .	22,080	247,924	421,037	302,657	106,011	37,864	1,137,573
less United States credits . . . . .	..	24,773	12,310	19,198	572	..	56,853
Payments from appropriations . . . . .	22,080	223,151	408,727	283,459	105,439	37,864	1,080,720
Estimated expenditure—							
1971-72—							
Total . . . . .	25,048	282,741	477,214	316,143	110,443	40,794	1,252,383
less United States credits . . . . .	..	21,660	12,133	28,723	805	..	63,321
Payments from appropriations . . . . .	25,048	261,081	465,081	287,420	109,638	40,794	1,189,062

(a) Includes defence aid for Malaysia, Singapore and South Vietnam.

## Logistic arrangement with the Government of the United States of America

The logistic arrangement referred to in previous issues of the Year Book continues to apply. Loans are now obtained on an annual basis.

## Reserve and Citizen Forces

Citizen and Reserve Forces may be called out by proclamation for continuous full-time service in a "Time of Defence Emergency". The particular circumstances giving rise to the proclamation of a time of defence emergency could be varied, but would occur in a situation where the Regular Forces needed the full-time support of the Citizen and Reserve Forces in hostilities short of general war.

The three Services also have volunteer Emergency Reserves which may be called out for continuous full-time service when they are needed. These reserves provide a ready means of supplementing and reinforcing operational units.

## Australian forces serving overseas

In response to an invitation of the Government of South Vietnam, Australia has provided Forces since 1962 to assist in the defence of that country. The number of men involved was increased progressively reaching 8,000 in the first half of 1968, and remained at approximately that level until November 1970 when approximately 1,000 men were withdrawn. In March 1971 a further reduction of about 1,000 men was announced, and in August 1971 the Prime Minister announced the withdrawal of all remaining combat forces from Vietnam.

As at 31 December 1971 the Australian element of the ANZUK Force in Malaysia and Singapore included:

*Navy*—One escort present in the area at all times, and one submarine present for part of the year; shore support units.

*Army*—One battalion of R.A.R.; one field battery; a reconnaissance flight; a transport platoon; elements of headquarters, signals and logistics units integrated with United Kingdom and New Zealand elements.

*Air Force*—Two squadrons of Mirage fighter aircraft and supporting elements.

## Defence co-operation with South-East Asian countries

In support of Australia's policy of contributing to the common defence of South-East Asia, the Government has undertaken several programmes of defence co-operation with friendly countries of South-East Asia.



Current defence aid to Malaysia and Singapore, to which amounts of \$16 and \$4 million respectively have been pledged for the period 1971-74, represents a continuation of the programme first commenced in 1964. To date over \$45 million has been spent on that programme. As well, other projects in defence co-operation have been undertaken, most notably the provision of 16 refurbished Sabre jet fighters to the Royal Malaysian Air Force. Under the official aid programme a wide range of equipment items has been and is continuing to be supplied to the Malaysian and Singapore armed forces. The training and development of those armed forces is further assisted by the attendance of numerous Malaysian and Singapore personnel on courses in Australia, and the despatch of servicemen from Australia to work with the Malaysian or Singapore armed force in specialised fields. During 1971, 329 Malaysian and 25 Singapore personnel arrived in Australia to attend training courses.

Australia will undertake a comprehensive programme of military training and defence support aid to South Vietnam at a cost of \$3.5 million in 1971-72. This aid will embrace the training of South Vietnamese armed forces personnel, at an Australian-sponsored jungle warfare training centre at Van Kiep, and the provision of military equipment for the South Vietnamese forces.

Defence co-operation between the Australian and Indonesian armed forces has also been developing in recent years. In 1971, 79 Indonesian personnel attended training courses in Australia while arrangements were also made for student exchange between Staff Colleges, and for Australia to assist in the mapping of areas of Kalimantan and Sumatra. Projects of this kind will continue.

Australia is providing the Khmer Republic with items of a logistic-support nature within a budgeted aid expenditure in 1971-72 of \$1.75 million. Dual-purpose items, such as Landrovers and communications equipment are being supplied. In addition, a programme of training is being provided for Khmer personnel in Australia, including basic officer training, jungle warfare, and pilot training, and Khmer personnel will also be trained in South Vietnam by Australian instructors in association with the United States of America's training establishments.

## Naval Defence

Prior to 1901, naval defence systems were organised under the State Governments. Information regarding these systems is given in Year Book No. 2, page 1084. An outline of the development of Australian naval policy is given in Year Books No. 3, page 1060, and No. 12, page 1012. An account appears in Year Book No. 15, pages 921-3, of the building of the Australian Navy, its costs, the compact with the Imperial Government, and other details. The growth and the activities of the Royal Australian Navy during the 1939-45 War are shown in Year Book No. 36, pages 1023-7.

Under the provisions of the Commonwealth of Australia Constitution Act the Minister of State for the Navy administers the Department of the Navy. Under the *Naval Defence Act* 1910-1966 the Royal Australian Navy is administered by the Naval Board. The Naval Board consists of the Minister as President, four Naval Members, and the Secretary to the Department of the Navy.

Strong links with the Royal Navy are maintained by a constant exchange of officers for extended tours of duty and by a full exchange of information and ideas. A liaison staff is maintained by the Royal Australian Navy in London and by the Royal Navy in Australia. Advanced training and staff courses in the United Kingdom are provided by the Royal Navy for Royal Australian Navy officers. A liaison staff is also maintained by the Royal Australian Navy in Washington, and a comprehensive exchange of information is provided by this link. Staff courses in the United States of America are also attended by officers of the Royal Australian Navy.

### **Ships of the Royal Australian Navy**

*The Fleet, December 1971:* Melbourne—aircraft carrier; Sydney—transport; Supply—oiler; Stalwart—destroyer tender; Perth, Hobart and Brisbane—guided missile destroyers; Vendetta, Duchess, Anzac—destroyers; Yarra, Parramatta, Stuart, Derwent, Swan, Vampire, Torrens, Queenborough—destroyer escorts; Teal—coastal minesweeper; Curlew, Snipe—coastal minehunters; Moresby, Paluma—surveying ships; Diamantina, Kimbla—oceanographic research ships; Oxley, Otway, Onslow, Ovens—submarines; Attack, Aitape, Acute, Adroit, Advance, Archer, Ardent, Arrow, Assail, Aware, Barbette, Barricade, Bayonet, Bombard, Buccaneer, Ladava, Lae, Madang, Samarai—patrol boats; Banks, Bass—auxiliaries; Jeparit—transport.

*In operational reserve, December 1971:* Tobruk—destroyer; Quiberon, Quickmatch—destroyer escorts; Gascoyne, Barcoo—oceanographic research ships; Culgoa—barrack ship; Hawk, Gull, Ibis—minesweepers; Bandolier—patrol boat; Castlemaine—ocean minesweeper; Sprightly—fleet tug; Kara Kara—boom gate vessel.

*On service overseas.* During the year ended December 1971 the following ships served in South-East Asian waters as units of the Commonwealth Strategic Reserve, and after its disbandment with the ANZUK force, with headquarters in Singapore: *Derwent*, *Duchess*, *Parramatta*, *Yarra*, *Vendetta*. The following ships served in support of the allied forces in South Vietnam: *Perth*, *Sydney*, *Hobart*, *Brisbane*.

The ships *Melbourne*, *Curlew*, *Anzac*, *Hawk*, *Snipe*, *Jeparit*, *Kimbla*, *Sydney*, *Otway*, *Brisbane*, *Perth*, *Hobart*, *Swan*, *Onslow*, *Diamantina* also made overseas visits.

### Fleet Air Arm

The Fleet Air Arm of the Royal Australian Navy maintains three front line squadrons for embarkation in the operational carrier H.M.A.S. *Melbourne*. These squadrons currently consist of Skyhawk A4-G fighter/ground attack aircraft, Tracker S2-E anti-submarine aircraft, and Wessex MK. 31B anti-submarine helicopters. Four training and support squadrons are based at the Naval Air Station, at Nowra, New South Wales. Other aircraft operated by the Navy are the Scout helicopter in *Moresby*, Iroquois helicopter (training and search and rescue), Dakota, Macchi trainer.

### Ship construction and repairs

There are two naval dockyards, one at Garden Island, New South Wales, and one at Williamstown, Victoria. Also, the dockyard at Cockatoo Island, which is operated by the Vickers Cockatoo Dockyard Pty Ltd by agreement with the Commonwealth, carries out considerable naval work. All three dockyards carry out ship refitting for the Navy.

The construction of the destroyer escort H.M.A.S. *Torrens* was completed at Cockatoo Island and the ship entered service in 1971. Construction of H.M.A.S. *Flinders*, a small hydrographic ship, was commenced at Williamstown Dockyard in 1970. An extended refit of the Daring Class destroyers was commenced at Williamstown Dockyard with H.M.A.S. *Vampire* which was recommissioned into the R.A.N. in late 1971. H.M.A.S. *Vendetta* is currently in refit.

A contract for a further two Oberon class submarines was let during 1971 to Scott Lithgow Ltd. Approval has been given for the construction of a fast combat support ship and an oceanographic ship, both of which are to be built in Australia in the near future. A preliminary design for a new destroyer was completed in 1971. This will determine the major characteristics of the ship and will provide the basis for a detailed design.

### Personnel, training, entry, women's services, reserves

*Personnel.* The estimated strength of the Royal Australian Navy in terms of personnel borne for full-time duty for 1971-72 is 17,459. At 30 December 1971 the actual strength of personnel borne for full-time duty was 2,150 officers and 14,785 sailors, which included 116 officers and sailors of the Citizen Naval Forces and 19 officers and sailors of the Royal Australian Navy Emergency Reserve.

*Training.* On entry, General List officers are trained at the Royal Australian Naval College, H.M.A.S. *Creswell* at Jervis Bay. The College was established to provide trained officers for the R.A.N. Junior entry to the College is at the age of fifteen to seventeen years and senior entry at a maximum age of twenty years. In November 1971 there were 99 cadet midshipmen under training. On completion of initial training, officers go to the Fleet for sea training, followed by advanced training either ashore in Australia, at universities or technical colleges, or at Royal Navy training establishments in the United Kingdom.

H.M.A.S. *Cerberus* at Westernport, Victoria, is the main training establishment for adult sailors in the permanent naval forces, while several advanced training schools are established in New South Wales. The period of initial engagement for sailors varies from six years for tradesmen to nine or twelve years, and on completion sailors may re-engage for shorter periods up to the age of fifty.

H.M.A.S. *Nirimba* at Quakers Hill, New South Wales, is the naval school for apprentices. It provides secondary education, as well as technical training in trades, to boys aged fifteen to seventeen and a half years. The school was established in 1956 to meet the R.A.N.'s increased demand for highly skilled tradesmen. In December 1971 there were 513 naval artificer apprentices under training.

H.M.A.S. *Leeuwin* at Fremantle, Western Australia, is the junior recruit training establishment. Entrants must be aged between fifteen and a half and sixteen and a half years. Training lasts one year and instruction is mainly academic, the remaining time being devoted to basic naval and disciplinary training. On completion of the course sailors are posted for a period of sea training, after which they proceed to technical and specialist courses. In December 1971 there were 456 junior recruits undergoing training.



On completion of initial training sailors join the Fleet for sea training before returning to the various training schools at H.M.A.S. *Cerberus*, H.M.A.S. *Penguin* and H.M.A.S. *Watson* at Sydney and R.A.N. Air Station at Nowra, New South Wales. Sailors who are selected for the Submarine service receive initial submarine training in the United Kingdom and a number of technical courses for certain sailors are conducted in the United States of America.

*Direct entry officers.* To meet increasing requirements for officers, direct entries are accepted into the Royal Australian Navy. Short service commissions of seven years are granted on completion of training as seamen, supply or aircrew officers to suitable applicants who have completed their secondary schooling and who are over seventeen years of age and under twenty-four years of age. Other direct entries may be approved outside these age limits from persons with appropriate qualifications and experience.

Opportunities exist for university undergraduates studying medicine, dentistry and engineering to enter the R.A.N., and on successful completion of their studies to commence short or full-time service in the Navy. Fully qualified doctors, dentists, engineers, instructors and legal officers may also enter the R.A.N. directly if they are of the appropriate age.

*Women's Services.* The present Women's Royal Australian Naval Service was inaugurated in January 1951. The numbers serving in shore establishments in December 1971 were 36 officers and 669 W.R.A.N.S. The Royal Australian Naval Nursing Service was reconstituted in November 1964, and its strength in December 1971 was 19 officers.

*Emergency Reserve.* In November 1964 approval was given to form the Royal Australian Naval Emergency Reserve to provide a readily available source of trained manpower which may be called on for continuous full-time service. The authorised establishment of this force is 2,000 officers and sailors. At 30 December 1971 the strength of the reserve available for mobilisation was 78 officers and 849 sailors, which excluded 3 officers and 16 sailors serving full-time. Members are required to complete thirteen days' training annually and are paid an annual bounty.

*Citizen Naval Forces.* The Citizen Naval Forces consist of the R.A.N. Emergency List, Royal Australian Fleet Reserve, Royal Australian Naval Reserve, Royal Australian Naval Reserve (Sea-going), Royal Australian Naval Volunteer Reserve, and Women's Royal Australian Naval Service Reserve. The authorised establishment of the combined forces is 10,000. At 30 December 1971 there were 1,336 officers and 3,813 sailors in the Citizen Naval Forces. These figures excluded 116 officers and 149 sailors serving full-time. The R.A.N.R. is the training reserve of the Citizen Naval Forces. Members carry out weekly training and thirteen days' continuous training annually; sailors engage for periods of three years. Other reserves do not normally carry out part-time training, but members may volunteer for periods of annual training and for periods of full-time service with the R.A.N. A Women's Royal Australian Naval Service Reserve consisting of ex-permanent naval forces W.R.A.N.S. officers and W.R.A.N.S. was authorised in June 1968 and enlistments commenced in mid-November 1968.

## Military Defence

A detailed historical account of the Australian defence forces prior to federation appears in Year Book No. 2, pages 1075-81. See also Year Book No. 12, page 999.

### Commonwealth systems

Under the terms of the Commonwealth of Australia Constitution Act the Commonwealth took over control of defence matters in March 1901. The growth of the Commonwealth Military Forces may be considered to have taken place in a number of phases. For particulars of the phases which cover the period from the welding together of the military forces of the States into one homogenous Army in 1902 up to the re-establishment of the Military Board and the organisation of Commands after the 1939-45 War see Year Book No. 46 and earlier issues.

National Service Training was introduced in 1951 and suspended in 1959-60. In November 1964 the Government announced that National Service was to be re-introduced from June 1965. The scheme provided for a period of two years full-time duty in the Regular Army followed by three years in the reserve. In 1971 the period of service was varied to eighteen months full-time duty followed by three and one-half years on the reserve. National Service registrants who are members of the Citizen Military Forces or who join prior to the ballot may elect to serve in the C.M.F. for a total of five years, as an alternative to full-time continuous National Service Training. Special C.M.F. units have been formed to provide for those persons who wish to serve in the C.M.F., but who are unable to do so in normal units, because of remote location, etc.



### Organisation

Army Headquarters is responsible for the policy and control of the Australian Army. The Military Board consists of the Minister for the Army, President; the Chief of the General Staff; the Vice Chief of the General Staff; the Adjutant-General; the Quartermaster-General; the Master-General of the Ordnance; the Deputy Chief of the General Staff; the Citizen Military Forces Member; and the Secretary, Department of the Army. After the 1939-45 War, Command Headquarters were established to implement Army Headquarters policy and to command and administer those units placed under their authority. Command Headquarters are established in the capital cities of Australia and Papua New Guinea. The geographic extent of Commands is as follows.

*Northern Command*—the State of Queensland.

*Eastern Command*—the State of New South Wales, less those parts included in Southern and Central Commands.

*Southern Command*—the State of Victoria and part of southern New South Wales.

*Central Command*—the State of South Australia, plus a portion of south-western New South Wales.

*Western Command*—the State of Western Australia.

*Tasmania Command*—the State of Tasmania.

*Northern Territory Command*—the Northern Territory.

*Joint Force HQ Papua New Guinea (Army Component)*—Papua New Guinea.

In January 1972 the Prime Minister announced that the Army was to be re-organised on a functional basis to consist of a Field Force Command, a Logistic Command and a Training Command. This re-organisation is to take place over a period of three to five years.

The Army is divided into the Field Force, Forces in Papua New Guinea, and the Australian Support Area, with both Regular and Citizen Military Forces elements in each. The basic formation of the Field Force is the division, which consists of nine infantry battalions with supporting arms and service units. Within the division three task force headquarters can command varying combinations of divisional units. The substantial part of the combat elements of one Regular and two C.M.F. divisions have been raised, together with logistic support units. The Regular element of the Forces in Papua New Guinea consists of two battalions of the Pacific Islands Regiment with a number of supporting units. An infantry battalion forms the major C.M.F. element. The Australian Support Area provides the training, administrative, and command structures on the mainland.

At 31 December 1971, units of the Australian Regular Army were deployed overseas as follows. In South Vietnam a residual force remained following the withdrawal of the task force which had been serving at the invitation of the Government of that country. In addition there was the major part of an infantry battalion group stationed in Singapore.

### Personnel, training, women's services, cadets

*Personnel.* The effective strength at 29 December 1971 was: Australian Regular Army, 42,543 (including 2,625 Pacific Islanders, 290 Citizen Military Forces on full-time duty, and 1,032 Women's Services); Citizen Military Forces, 27,910.

*Staff College.* Until 1938 the training of staff officers was carried out in the various Military Districts throughout Australia, except in cases where officers were selected from time to time to attend courses abroad. In 1938 an Australian Command and Staff School, located in the original Officers' Mess at Victoria Barracks, Sydney, was established. Between 1939 and 1945 the training of staff officers was carried out under varying conditions by different schools in accordance with the changing needs of the war.

Early in 1946 the Staff School (Australia) was established at Seymour, Victoria, and redesignated the Staff College in conformity with other Commonwealth training establishments for training officers for command and staff appointments. The College was later moved to Queenscliff, Victoria, where it is at present situated. The course is held annually and is of twelve months' duration. The normal intake is seventy students, and on successfully completing the course an officer is awarded the symbol 'psc'. The course is designed to train selected officers for appointments in all branches of the staff in peace and war and to prepare them to assume, after experience, command and higher staff appointments.

Included in the 1972 course will be students from Brunei, Canada, Ceylon, India, Indonesia, Malaysia, New Zealand, Pakistan, Thailand, United Kingdom and United States of America. Vacancies on each course are reserved also for officers who may be nominated by the Royal Australian Navy, the Royal Australian Air Force, and the Commonwealth Public Service.

In order to ensure common standards in tactical doctrine, and staff and command training throughout the Commonwealth of Nations, liaison is maintained with other Staff Colleges, and to this end there is also a reciprocal exchange of instructors between the United Kingdom, the United States of America, and Australia. An instructor is also provided by New Zealand.

*Royal Military College.* The Royal Military College was established in 1911 at Duntroon in the Australian Capital Territory for the purpose of providing trained officers for the Army. The conditions of entry are laid down in the Royal Military College Regulations. The course is four years of military and academic studies. The first three years are primarily academic and the fourth year military. Following affiliation with the University of New South Wales a Faculty of Military Studies was introduced in 1968. Cadets who meet the requirements for admission to the Faculty may take a course, leading to the award of a degree in Military Studies by the University of New South Wales in one of the following: Arts, Applied Science or Engineering. Cadets not admitted to the Faculty take a diploma course appropriate to their educational background. On graduation, cadets are appointed lieutenants in the Australian Regular Army. The College also trains New Zealand cadets for commissions in the New Zealand Permanent Forces. In 1967 one Thai cadet commenced training at the College; another Thai cadet commenced in 1970 and a third in 1972.

*Officer Cadet School.* The Officer Cadet School was established in 1951 at Portsea, Victoria, for the purpose of speeding up the production of junior regimental officers for the Australian Army. Serving members of the Regular Army, the Citizen Military Forces and civilians between the ages of eighteen and a half and twenty-two and a half are eligible to apply for entrance. A special entry provides for candidates up to twenty-four and a half years. The course lasts for forty-four weeks, and on graduation cadets are appointed second-lieutenants in the Australian Regular Army. Graduates normally proceed to further training at the Army School of the Arm and Service to which they have been allotted before being posted to regimental duties. The Officer Cadet School also trains officers on occasions for Kenya, Malaysia, New Zealand, Thailand, the Philippines, Brunei, the Pacific Islands Regiment and South Vietnam.

*Officer Training Unit.* An Officer Training Unit has been established at Scheyville, New South Wales, which is responsible for the training of National Service Officers.

*Women's Royal Australian Army Corps School.* The W.R.A.A.C. School, established in 1952 at Mildura, Victoria, moved to Mosman, New South Wales, in 1958. It has three wings, one whose primary task is the training of officer cadets for the W.R.A.A.C., one for the training of non-commissioned officers at all levels and for other special courses, and one which is a basic training wing. The officer cadets are selected from eligible applicants, who may be serving members between nineteen and a half and thirty-two years of age, or civilians between nineteen and a half and thirty years of age. The course is of twenty-seven weeks' duration and on graduation cadets are appointed lieutenants in the Royal Australian Army Nursing Corps or the Women's Royal Australian Army Corps.

*Army Apprentices' School.* The Army Apprentices' School was opened in 1948 at Balcombe, Victoria, with the aim of training youths as skilled tradesmen for the Australian Regular Army and to form a background for an Army career with prospects of promotion for the graduates. The course is open to youths between the ages of fifteen and seventeen years and provides training in a number of highly skilled trades. Most apprentices attend two years of intensive theoretical and practical work at the Apprentices' School which is followed by two years on-the-job training in an appropriate Army workshop or technical unit under the supervision of an Apprentice Master. The exceptions to this are the Radio Tradesmen who train for three years at the Apprentices' School before one year on-the-job training. Before leaving the Apprentices' School all apprentices take the Victorian Apprenticeship Commission's final grade public examination, which ensures that they will be accepted as qualified tradesmen in civilian life when they eventually leave the Army. In addition to trade and military training, the Apprentices' School provides the facility for apprentices to attain an educational standard of Victorian Technical Leaving.

*Other Schools.* Army schools have been established for the major Arms and Services for the purpose of training officers and other ranks in the up-to-date techniques of their own Arm or Service, to qualify them for promotion requirements, and to produce trained instructors. Courses at Army schools are conducted for members of both the Regular Army and the Citizen Military Forces.

The following Army schools have been established: Jungle Training Centre, Armoured Centre, School of Artillery, School of Military Engineering, Transportation Centre, School of Military Survey, School of Signals, Infantry Centre, Army Aviation Centre, Army Intelligence Centre, Royal Australian Army Service Corps Centre, Royal Australian Army Medical Corps School of Army Health, Royal Australian Army Ordnance Corps Centre, Royal Australian Electrical and Mechanical Engineers' Training Centre, Royal Australian Army Provost School, School of Music, Air Support Unit (Army Component), and Air Movement Training and Development Unit (Army Component).



*Women's Services.* In July 1950 approval was given for the enlistment of women into the Australian Regular Army on a limited scale. Enlistment commenced into the Royal Australian Army Nursing Service in November 1950 and into the Australian Women's Army Corps early in 1951. In February 1951 the Royal Australian Army Nursing Service became a Corps and was designated the Royal Australian Army Nursing Corps (R.A.A.N.C.). During June 1951 the Australian Women's Army Corps was redesignated the Women's Royal Australian Army Corps (W.R.A.A.C.). The Women's Services in the Australian Regular Army now comprise two Corps only, the Royal Australian Army Nursing Corps and the Women's Royal Australian Army Corps.

Women's Services are incorporated in the Citizen Military Forces, and one company of the Women's Royal Australian Army Corps is located in each Command excluding Northern Territory Command and Papua New Guinea. Companies of the Royal Australian Nursing Corps are also located in each Command excluding Northern Territory Command and Papua New Guinea.

*Australian Cadet Corps.* The Australian Cadet Corps is a voluntary organisation. It serves as a training ground to provide, to some extent, the future officers and non-commissioned officers of the Australian Military Forces, and, as such, occupies a foremost position in the scheme of national defence. The Australian Cadet Corps, does not, however, form part of the Australian Military Forces. School Cadet units are raised at educational establishments throughout the Commonwealth and Papua New Guinea, except in the Northern Territory. The minimum age for enrolment is the year in which the applicant reaches the age of fourteen years, and cadets, who, in the large majority of schools receive a free issue of A.M.F. pattern uniform, may remain in the Cadet Corps until they cease to be pupils of the educational establishments concerned. A few units retain their own pattern school uniform and are not issued with A.M.F. pattern uniforms. Provision is made for the appointment of officers of cadets, cadet under-officers, warrant and non-commissioned officers on an authorised establishment scale from within school units. School Cadet units may be, and in many cases are, affiliated with Citizen Military Force units. The establishment of the Corps is 46,000 all ranks, and at 15 October 1971 comprised 337 School Cadet units with a posted strength of 38,986 all ranks.

## Air Defence

There are two elements in air defence: static air defence and counter air operations by strike aircraft.

Static air defence is provided by manned interceptor fighter aircraft, at times augmented by surface-to-air missile systems and gun defences, all operating under the direction of a control organisation. Such static systems are limited in their defensive coverage by the radius of action of the fighter aircraft and/or the effective operating range of the controlling radar.

Complementary to the static air defence system and capable of much wider ranging activities are the counter air strike forces. The aim of these forces is to destroy the enemy's offensive air capabilities at their source.

### Higher organisation

The Air Board is responsible to the Minister for Air for the control, organisation, and administration of the Royal Australian Air Force and is constituted as follows: Chief of the Air Staff, Air Member for Personnel, Air Member for Supply and Equipment, Air Member for Technical Services, and the Secretary, Department of Air.

The Air Board administers and controls R.A.A.F. units in Australia and its Territories through two commands, Operational Command and Support Command. The guiding principles of the command organisation within Australia are to decentralise day-to-day operating activities as far as possible and to streamline the force and make it as efficient as possible. Operational units overseas, working within the broad directives issued by the Air Board, comprise the R.A.A.F. components of the ANZUK Force located at Butterworth in Malaysia and in the Republic of Singapore. The R.A.A.F. component of the Australian Forces in South Vietnam was in the final process of being withdrawn during 1972.

The members of the Air Board and their staffs are located at the Department of Air in Canberra. An R.A.A.F. representative is located in London, there is an R.A.A.F. mission in Italy, and air attachés are located in Djakarta, Saigon, Paris, and Washington. *Operational Command* is responsible for the command of operational units and the conduct of their operations within Australia and its territories. *Support Command* is responsible for the recruitment and training of personnel, and the supply and maintenance of service equipment.



### Jubilee Year

As this year marks the commencement of a new era in the history of the Royal Australian Air Force, following the completion of its Jubilee Year in 1971, some additional information has been compiled to commemorate the 50th Anniversary of the creation of the R.A.A.F. During 1971 there were seven air displays in five States and the Australian Capital Territory. H.R.H. the Duke of Edinburgh, as Marshal of the R.A.A.F., participated in the main celebrations. A special souvenir book *The Golden Years* was published and a commemorative postage stamp issued.

### Development of the Royal Australian Air Force

Although junior in years to the Army and Navy the R.A.A.F. has achieved a commendable record in a comparatively short period.

The development of the R.A.A.F. has been in three separate phases, starting with the creation and slow growth in Australia of an Air Force as a distinct entity in the 1920's and 1930's. In 1925 the first reference to Air Defence appeared in Year Book No. 18, page 610 and summarised developments from 1911 to that time.

In 1929 with the abolition of the Air Council and the constitution of the Defence Committee, the regulations relating to the Air Board were amended to delete all reference to the Air Council. The Air Board in its control and administration of the Air Force functioned under the Department of Defence and was responsible to the Minister for Defence. The Headquarters of the Air Board came to be known as the Royal Australian Air Force Headquarters or more generally as Air Force Headquarters. A civilian element was established within the Headquarters and its officers were members of the Defence Department. This continued until 13 November 1939, when three additional Departments were established separately from the Department of Defence, namely the Departments of Navy, Army and Air.

A reference to the constitution and expansion of the Air Board is contained in Year Book No. 36, page 1027. (In 1954 the Secretary of the Department of Air was appointed a member of the Air Board in place of the Finance Member.)

The second phase saw the great expansion of the Air Force during the 1939-45 War, rising from a total of some 3,000 personnel to over 180,000 including approximately 18,000 in the Women's Auxiliary Australian Air Force. On 1 September 1945 there were 489 individual R.A.A.F. units compared with the original twenty-two at the outbreak of war. Full details of the expansion and development of and type of operations of the R.A.A.F. in the 1939-45 War may be found in Year Book No. 36, page 1027.

By the end of the 1939-45 War air power had grown into a recognisable third dimension in modern warfare and events since then have continued to demonstrate the value of the distinctive role of air power in any armed conflict.

The final phase required the restructuring and development of the Air Force from the immediate post war period and in 1953 three R.A.A.F. Field Commands were formed to control and administer the first phase of the change over from the old Area structure to a new functional command organisation. Concurrently with the introduction of the new command structure the title of the central controlling authority for the Air Force was changed to that of Department of Air.

In 1959 the number of commands was reduced from three to two, one dealing with operations and the other providing all support required.

In 1960 the Department of Air transferred from Melbourne to Canberra.

### Operations since the 1939-45 War

The post World War II era saw a continuation of actual military operations by the R.A.A.F. in Korea, Malaya and South Vietnam.

*Operations in Korea and Malaya.* Reference to R.A.A.F. participation in operations in Korea is contained in Year Book No. 40, pages 1112-13. Australian assistance in the form of one transport squadron provided to the Malayan authorities is detailed in Year Book No. 40, page 1113. A reference to operations by No. 1 (Bomber) Squadron in Malaya is contained in Year Book No. 45, page 1066.

*Operations in South Vietnam.* No. 2 Canberra Bomber Squadron operated in South Vietnam from April 1967 to June 1971 and flew over 13,000 sorties. No. 9 Helicopter Squadron operated in South Vietnam from June 1966 to December 1971 and flew over 237,000 sorties in support of the 1st Australian Task Force. It carried over 414,000 passengers, 4,000 medical evacuations and nearly 27 million pounds of freight. R.A.A.F. Transport Flight Vietnam and later No. 35 Caribou Squadron operated in South Vietnam from August 1964 to February 1972 and had flown over 81,000 sorties and its loadings included over 677,000 passengers, 106 medical evacuations, over 91 million pounds of freight and over 12 million pounds of mail.

**R.A.A.F. awards and decorations since 1939-45 War**

The numbers of the various awards and decorations conferred on members of the R.A.A.F. for gallantry or meritorious service in Korea, Malaya and South Vietnam appear below.

	<i>Korea</i>	<i>Malaya</i>	<i>Vietnam(a)</i>	<i>Total</i>
Companion Order of Bath (C.B.) . . . . .	..	3	..	3
Commander, Order of British Empire (C.B.E.) . . . . .	..	..	8	8
Distinguished Service Order (D.S.O.) . . . . .	3	..	9	12
Officer Order of British Empire (O.B.E.) . . . . .	3	1	2	6
Member Order of British Empire (M.B.E.) . . . . .	11	5	16	32
Distinguished Flying Cross (D.F.C.) . . . . .	(b)45	9	(c)61	(b)(c)115
Distinguished Flying Cross, Bar . . . . .	6	4	3	13
Air Force Cross (A.F.C.) . . . . .	13	2	..	15
Air Force Cross, Bar . . . . .	1	..	..	1
Royal Red Cross (Associate) . . . . .	1	..	..	1
Conspicuous Gallantry Medal (C.G.M.) . . . . .	..	..	1	1
George Medal (G.M.) . . . . .	..	..	1	1
Military Medal (M.M.) . . . . .	..	..	1	1
Distinguished Flying Medal (D.F.M.) . . . . .	18	1	10	29
British Empire Medal (B.E.M.) . . . . .	2	7	5	14
British Empire Medal (B.E.M.) for gallantry . . . . .	..	..	1	1
Mention in Dispatches . . . . .	(d)156	35	(e)129	(d)(e)320
Mention in Dispatches (Second) . . . . .	1	..	..	1
King's or Queen's Commendation . . . . .	15	1	..	16
Foreign Awards (United States of America) . . . . .	(f)140	..	..	(f)140
Commander-in-Chief Cards . . . . .	..	3	..	3

(a) Summary of awards granted in Vietnam is correct at 28 January 1972. (b) Includes 4 awards to RAF personnel. (c) Includes 4 awards to RNZAF and 1 to RAN personnel. (d) Includes 7 awards to RAF personnel. (e) Includes 2 awards to RNZAF personnel. (f) Includes 4 awards to RAF personnel.

**Organisation of units**

*Bases.* Each command is established with the units necessary to carry out its allotted function. There is no fixed rule in relation to the number and types of units within each command, as this depends upon the nature of its present and future responsibilities. Where possible, units having similar functions or requiring similar facilities are located together, and the geographical locations are known as bases.

*Formations*—comprising a headquarters unit to control the activities of a number of units at one location; each formation has a base squadron which provides common services to all units at the location.

*Flying squadrons*—strike reconnaissance, air defence, ground attack, medium and short range transport, helicopter, and maritime reconnaissance squadrons which undertake the operational flying and in conjunction with operational conversion units, the operational flying training commitments of the R.A.A.F.

*Operational conversion units*—specialising in operational conversion training of aircrew for the strike reconnaissance, air defence, and ground attack squadrons.

*Aircraft depots*—specialising in major overhaul, etc., of aircraft and equipment.

*Stores depots*—centrally located depots to which stores and equipment ordered by the R.A.A.F. are delivered for distribution to units.

*Airfield construction squadron*—specialising in airfield construction tasks in support of the R.A.A.F. operational component within Australia and the Territories.

*Telecommunications units*—responsible for the communications services of the R.A.A.F.

*R.A.A.F. Hospitals*—hospitals in Australia and at Butterworth providing medical services for the R.A.A.F.

*Flying and ground schools and units*—schools and units specialising in the aircrew and ground staff training required by the R.A.A.F.

*R.A.A.F. Diploma Squadron and R.A.A.F. Academy*—training units, to diploma and university degree level respectively for officer cadet entrants to the R.A.A.F.

*R.A.A.F. Staff College*—trains specially selected R.A.A.F. officers for higher staff and command posts.

### Aircraft

The R.A.A.F.'s strike reconnaissance force is equipped with Canberra and Phantom F4-E aircraft, and the air defence and ground attack squadrons are equipped with the Mirage 111-O. Transport aircraft currently in use are Hercules C130A and E, Caribou, Dakota, Mystere 20, HS748, and BAC111. The two helicopter squadrons operate the Iroquois and the two maritime squadrons operate Neptune SP2H and Orion P3-B aircraft. Aircraft used for training are the Winjeel, Macchi, HS748, and Mirage 111-O.

### Personnel, reserve, woman's services

At 30 December 1971, the authorised Permanent Air Force establishment was 24,963 and the Citizen Air Force 1,080: the enlisted strength was Permanent Air Force 22,378 and Citizen Air Force 763, while the strength of the General Reserve was 5,774. The Permanent Air Force figures include the Women's Royal Australian Air Force, which has an establishment of 1,022 and strength of 857, and the R.A.A.F. Nursing Service with an establishment of 122 and strength of 101.

## Department of Supply

For information relating to the creation of the Department of Supply and its development up to 1959 see Year book No. 51, page 1204, and earlier issues. On 18 December 1959 the Department assumed responsibility for the operation and management of space tracking stations in Australia on behalf of the United States of America's National Aeronautics and Space Administration (NASA). On 29 March 1962 Australia became a foundation member of the European Launcher Development Organisation, and the Department accepted responsibility for the test firing of the launching rocket for that Organisation's experimental satellite, using the facilities of the Woomera Rocket Range. The last of these ten test firings at Woomera was on 12 June 1970.

On 1 May 1968 the Department took over the Administration of the Antarctic Division from the Department of External Affairs.

### Functions of Department

The functions of the Department of Supply include the following.

Defence research and development, including the operation of the Joint United Kingdom-Australia Weapons Research Project, and Australian research and development.

Planning, establishment, operation and management of facilities producing aircraft, guided missiles, small arms, ammunition, explosives, marine engines, clothing, telecommunications equipment, and other defence goods.

Printing for the Defence group of departments.

Arrangement of contracts for purchasing in Australia of supplies and services required by the Armed Forces and certain other Government organisations.

Acquisition, maintenance, and disposal of strategic materials.

Investigation and development of Australian sources of supply in connection with defence.

Disposal of surplus or obsolescent Commonwealth goods on behalf of all departments.

Provision of Commonwealth transport facilities outside the Australian Capital Territory and the Northern Territory.

Provision and control of stores required for or in connection with matters administered by the Department of Supply, and general storage for other departments as required.

Arrangements for ascertaining costs and the control and limitation of profits in connection with the production of munitions and other defence goods.

Operation and management of space tracking stations and certain other facilities on behalf of the Government of the United States of America.

Organisation of expeditions and establishment and maintenance of stations in the Antarctic for the purposes of exploration and conducting scientific studies.

The Minister for Supply administers the *Supply and Development Act 1939-1966*, except in so far as it concerns the building (see also Chapter 12, Transport and Communication), repair, and maintenance of merchant ships and the building, extension, alteration, repair, and maintenance of shipyards, drydocking, and repair facilities for merchant ships.

The Minister for Supply also administers the *Antarctic Treaty Act 1960*, the *Australian Antarctic Territory Acceptance Act 1933*, the *Australian Antarctic Territory Act 1954-1963*, and the *Heard Island and McDonald Islands Act 1953-1963*.

For the performance of the above functions the Department is organised into five Divisions, namely:

Research and Development; Munitions Supply; Aircraft, Guided Weapons and Electronics Supply; Planning and Procurement; and Finance and Management Services.



### Research and Development

The Research and Development Division is responsible for scientific research and development in relation to war material; the operation of the Joint United Kingdom-Australian Weapons Research Project; and support of space research programmes for the United States of America's National Aeronautics and Space Administration (NASA). The headquarters is situated in Canberra, and the following establishments are included in the Division: (a) Weapons Research Establishment, Salisbury, South Australia; (b) Defence Standards Laboratories, Maribyrnong, Victoria; Woodville North, South Australia; Alexandria, New South Wales; Joint Tropical Research Unit (J.T.R.U.) at Innisfail, North Queensland in conjunction with the United Kingdom Ministry of Defence; (c) Aeronautical Research Laboratories, Fishermen's Bend, Victoria; and (d) Central Studies Establishment, Canberra, Australian Capital Territory.

*Weapons Research Establishment.* The Establishment has three scientific Wings, namely Trials Wing, Applied Physics Wing and Weapons Research and Development Wing. The Trials Wing is concerned with the operation, development and instrumentation of the Woomera Range, and the planning, execution, and assessment of trials to meet the requirements of projects approved under the United Kingdom-Australia Joint Project Procedures. The Applied Physics Wings conducts scientific research of significance to the Defence requirements of Australia in the broad fields of systems analysis, electronics, optics, radio propagation, radar, lasers, infra-red, visual surveillance, whilst the Weapons Research and Development Wing is engaged similarly in aeroballistics, weapon systems, rocket propulsion and marine physics for the Defence group of departments.

In addition, an Engineering Wing provides engineering design, development and maintenance facilities, and certain technical services for the scientific Wings (including the Joint Project Trials Wing). Engineering support is also provided for other Research and Development Division Laboratories. The Engineering Wing also undertakes tasks for other Supply organisations and the Australian Defence Services.

*Defence Standards Laboratories.* This Establishment (at Maribyrnong, Victoria) provides a scientific service to the Defence Services, Department of Supply factories and other authorities engaged in support to Defence, generally within the fields of chemistry, physics, metallurgy, engineering, explosives and ammunition, and to a limited extent, in the fields of biochemistry and physiology. It also undertakes scientific research appropriate to its responsibilities and of significance to the defence requirements of Australia. It is the principal Standards Laboratories of the Defence group of Departments and provides calibration facilities for the higher grades of standards. The Australian National Standards Commission has appointed D.S.L. as a verifying authority under the Weights and Measures (National Standards) Act.

Branches are located at Woodville North, South Australia and Alexandria, New South Wales.

The Joint Tropical Research Unit (J.T.R.U.) at Innisfail provides facilities for studying the behaviour and degradation of a wide range of materials and stores in hot/wet and hot/dry tropical environments.

*Aeronautical Research Laboratories.* The work of this establishment is broadly related to the aeronautical aspects of materials science, mechanical engineering, aircraft structures, aerodynamics and system studies. It undertakes research and development on specific defence projects, provides advice and conducts investigations for the Services, Government departments and industries engaged in defence work. Scientific research related to these responsibilities and of significance to the defence requirements of Australia is also undertaken.

*Central Studies Establishment.* This establishment assists the Defence group of departments in the application of Operational Research and Systems Analysis techniques to the study of military problems.

*United States of America's projects.* Agreements have been signed by the Governments of Australia and the United States of America to co-operate in the establishment and operation in Australia of space vehicle tracking stations. The agencies for the Australian and the American Governments are the Department of Supply and the National Aeronautics and Space Administration (NASA) respectively.

As part of the world-wide network supporting NASA's space programme the stations are designed to track spacecraft in their orbits around the earth or on their journey into space, to receive telemetered data from the spacecraft and to issue radio commands controlling the spacecraft's manoeuvres. The Department of Supply is responsible for managing, staffing and operating the stations on behalf of NASA. The stations which are now in operation are at:

- Island Lagoon near Woomera (deep space probes and optical tracking of scientific satellites);
- Carnarvon in Western Australia (manned space flights and scientific satellites);
- Orroral Valley in the A.C.T. (scientific satellites);

Honeysuckle Creek in the A.C.T. (manned space flights, particularly the 'man on the moon' Apollo project);

Tidbinbilla in the A.C.T. (deep space probes and manned space flights). Construction of a 210 ft tracking antenna is proceeding at this station; it is scheduled for completion in 1973.

An extensive communications system links the tracking stations with the control centres in the United States of America. At all five stations the responsibility is vested in a station director who is a senior officer of the Department of Supply. Tidbinbilla, Honeysuckle Creek and Carnarvon, play an important part in the communications network during the Apollo moon-landing missions.

Under the Australian Government's policy of using the resources of private industry wherever possible, contracts for operation and maintenance services at the stations have been let as follows: Amalgamated Wireless (A'asia) Ltd, (Carnarvon and Orroral Valley, Tidbinbilla and Island Lagoon), and Standard Telephones and Cables Pty Ltd (Honeysuckle Creek). NASA expenditure on operations in Australia for the period July 1970 to June 1971 was \$11.5 million.

The Department also manages and operates the Project Hibal Balloon Launching Station, based at Mildura, Victoria. The agencies for this project are the Department of Supply and U.S.A. Atomic Energy Commission. The primary purpose of the station is to monitor the level of radioactivity in the upper atmosphere using high altitude balloons. Research experiments are also flown on behalf of United States and Australian Universities and research institutions.

### Munitions Supply

The Department of Supply is responsible for the production of munitions required by the Armed Services. Production is carried out in Government factories, and a wide range of orders is also placed with private industry.

The factories currently in operation and their main products or services are as follows:

Ammunition Factory, Footscray, Victoria (fuses, primers, cartridge cases and small arms ammunition); Clothing Factories, Victoria (uniforms and clothing); Defence Printing Establishment, Victoria (special defence printing requirements); Engine Works, Victoria (building and servicing of marine diesel engines); Explosives Factory, Albion, Victoria (high explosives, propellants, chemicals); Explosives Factory, Maribyrnong, Victoria (propellants, explosives, chemicals, ammunition, rocket motors); Explosives Factory, Mulwala, New South Wales (propellants, chemicals); Munitions Filling Factory, St Marys, New South Wales (ammunition filling and assembly other than small arms ammunition); Ordnance Factory, Bendigo, Victoria (heavy guns, mountings, large turbine gears); Ordnance Factory, Maribyrnong, Victoria (guns, projectiles, fire control equipments, rocket motor components); and Small Arms Factory, Lithgow, New South Wales (rifles, machine guns, rocket launchers, mortar bombs, small calibre shells).

### Aircraft, guided weapons and electronics supply

*Aircraft.* Production both in Government factories and in industry of military types of aircraft and aero-engines and of other aircraft components required by the Services is administered by the Department of Supply through this Division. Planning of capacity and the negotiation of contractual arrangements concerning aircraft modification, repair and overhaul, and for the supply of spare parts and airborne equipment for the Services, are also functions of the Division.

The following factories are operated by the Division: The Government Aircraft Factory at Fishermen's Bend and the Final Assembly Workshops and Test Airfield at Avalon, Victoria, and the Machine Shop at Northfield, South Australia.

During 1968 the French Mirage supersonic fighter aircraft production programme for the R.A.A.F. was completed. The current aircraft production programme comprises the Jindivik radio-controlled target aircraft, which has been or is being supplied to Britain, Sweden, and the United States of America, as well as to the Weapons Research Establishment and the Royal Australian Navy.

Apart from the Government Aircraft Factory, the Commonwealth Aircraft Corporation Pty Ltd is the only major aircraft manufacturer in Victoria. The Corporation is the prime contractor for the Australian production for the R.A.A.F. of the Italian Macchi jet trainer and for the production of the British Viper engine that powers this aircraft. Hawker de Havilland Australia Pty Ltd at Bankstown and Lidcombe, New South Wales is the major sub-contractor for the Macchi.

*Guided weapons:* The production of the Ikara anti-submarine missile is continuing at the Government Aircraft Factory at Fishermen's Bend. Production of the complete Ikara system, covering broadly the missile, motor, propellants, guidance equipment, launcher, and magazine handling equipment, is a combined effort by departmental establishments and industry, directed and co-ordinated by the Department.

Ikara has been fitted to 9 R.A.N. ships and variants have also been purchased by the British and Brazilian Navies. Other overseas sales are being actively pursued. Turana, a development from the Ikara concept which uses the same shipboard launchers, is a small jet engine-powered, pilotless target aircraft being produced by the Government Aircraft Factory for the R.A.N.

At St. Marys, New South Wales, a Guided Weapons and Electronics Support Facility has been established to repair and maintain guided missiles for the Armed Services. The facility also provides support to the Services in calibration, aerial testing and modelling, and the provision of sonar and environmental test facilities.

*Electronics:* The Department is responsible for the technical aspects of production in and procurement from Australian industry of telecommunications and electronic equipment for the Australian Services, for Commonwealth authorities such as Directorate of Civil Defence and for foreign aid programmes administered by the Department of Foreign Affairs.

Some of the more important projects handled for the Services recently have included UHF multi-channel radio relay equipment, a range of military pack sets, tactical training systems for the training of ship and submarine personnel, mobile calibration centres, automatic message switching systems and air traffic control tower installations.

A large contract is in existence for the domestic development of micro-electronic devices. Other contracts have also been arranged to establish the reliability of Australian-made electronic equipment and components.

### Planning and Procurement

*Contract board:* The Board, constituted under the *Supply and Development Regulations 1939-1966*, arranges for the procurement of supplies and services for the Naval, Military and Air Forces of the Commonwealth and for the Department of Supply. Upon request, the Board also arranges contracts on behalf of other Commonwealth departments and authorities. It also arranges disposal—by means of public tender, auction or otherwise—of all surplus or unserviceable Commonwealth-owned goods. The Board comprises representatives of three Service Departments and of the Department of Supply. In each State there is a District Contract Board similarly constituted, which is authorised to exercise the functions of the Contract Board within certain financial limits.

The Board's policies and procedures are administered by the Contracts Branch of the Department of Supply in Canberra.

#### PURCHASES AND REALISATIONS FROM DISPOSALS 1969-1970 AND 1970-71 (\$'000)

<i>District Contract Board</i>	<i>Purchases</i>		<i>Realisations from disposals</i>	
	<i>1969-70</i>	<i>1970-71</i>	<i>1969-70</i>	<i>1970-71</i>
New South Wales . . . .	44,939	41,675	3,595	4,275
Victoria . . . . .	125,788	114,450	3,726	6,792
Queensland . . . . .	7,078	10,447	1,048	1,253
South Australia . . . . .	9,406	10,546	1,472	1,809
Western Australia . . . .	1,327	2,220	521	601
Tasmania . . . . .	287	255	148	155
<b>Total . . . . .</b>	<b>188,825</b>	<b>179,593</b>	<b>10,510</b>	<b>14,885</b>

*Planning.* The central planning authority of the Department is the Production Planning Branch, whose principal functions are:

- to study manufacturing capacity available for the Services' requirements in peace and war and to plan for and assist in the development of additional production capacity and to plan the organisation of industrial resources for defence production in war;
- to provide and administer reserve stocks of materials and reserve pools of plant, equipment and other requirements needed for rapid expansion in the event of war;
- to receive and allocate to the appropriate departmental divisions all orders and procurement demands placed on the Department; to monitor all aspects of progress in satisfying them and to keep client departments informed of progress;



to provide advisory services in the field of materials supply and utilisation to Government factories and contractors engaged in the production of munitions requirements;  
to administer the national stockpile of strategic materials.

A number of Industry Advisory Committees has been established to advise the Minister and the Department of the ability of industry to meet the Services' matériel requirements for mobilisation in war. The Committees represent all major activities concerned with the supply of defence equipment and the members of the Committees include industrialists of wide experience and the highest ability in their chosen field.

Emphasis is given to a maximum participation by Australian Industry in meeting the requirements of the Defence Services, whenever it is economically and technically possible to do so. Where it is necessary to order a requirement from overseas, the aim is still to involve local industry through co-production or in work of an offset nature.

The Department's efforts are directed towards:

- achieving closer collaboration with industry and bringing to its early attention, the forecast requirements of the Services;
- exercising and upgrading the technological capability of industry by awarding contracts to assist in complex production and development tasks for defence purposes;
- seeking co-production and offset opportunities with overseas industry in defence contracts; and
- encouraging and facilitating participation in sub-contract work from overseas industry.

*Stores and transport.* The Stores and Transport Branch functions as the central storage and transport authority for most Commonwealth departments. It is the authority for the arrangement of furniture removals at departmental expense in all States, but not in the Northern Territory. It has agents in Darwin. It also operates a shipping and customs section and the England-Australia bulk air freight scheme for Commonwealth departments.

On 27 June 1971 the Branch had under its control land, buildings and works, vehicles, plant and equipment valued at \$29,415,969; 4,872 motor vehicles and 3,096,129 sq ft of storage space as well as storage facilities for large quantities of chemicals, bulk liquids and explosives.

*Overseas sales and aid.* The Sales and Aid Branch promotes sales of Departmental products and administers the Department's patents and licensing agreements. It is responsible also for administering arrangements for the supply of military type stores under Defence Aid programmes.

The Branch is also responsible for the development, co-ordination and monitoring of reciprocal purchasing arrangements against Australian defence purchases from overseas, and the development of closer co-operation between Australia and New Zealand in the defence supply field.

### Finance and Management Services

*Finance.* The total expenditure on Department of Supply activities in 1970-71 was \$211,243,000. This was made up of \$108,029,000 from Parliamentary Appropriations and \$103,214,000 from Trust Fund accounts which included \$20,564,000 for stores and transport, \$61,863,000 for Government munitions and aircraft factories, \$19,772,000 for projects of other Governments, and \$1,015,000 for cafeterias.

*Management Services.* The Technical Services Branch of the Department provides an operating, advisory and consultative service to the Department for industrial engineering, office methods, management operations research, archives and registry practice, instrumentation, electrical and communications engineering services, materials handling, defence standardisation, stores cataloguing, library services and safety.

The Automatic Data Processing Branch provides services to the Department by: assisting in the specification of data-processing systems; designing and implementing computer based systems; co-ordinating computer equipment requirements; and providing ADP training programmes.

*Personnel.* At 30 November 1971 the Department employed 20,979 personnel as follows: administration 2,432; cadets and trainees 299; laboratories 6,200; aircraft production 1,969; munitions production 6,455; miscellaneous production 1,040; Stores and Transport Branch 2,556; and overseas staff 28.



## CHAPTER 5

### REPATRIATION

The Repatriation Commission, established under the *Repatriation Act* 1920-1971, consists of three full-time members. It is responsible for the administration of the Repatriation Act and associated legislation, all matters of policy, and the general administration and overall supervision of the Repatriation Department. The Chairman of the Commission is also the Permanent Head of the Repatriation Department, which provides the administrative machinery through which the Commission operates. The central office is in Canberra and there is a branch office, under the control of a Deputy Commissioner, in each State.

The principal functions of the Department are: the payment of war and service pensions and allowances to eligible ex-servicemen and ex-servicewomen and their dependants; the provision of medical treatment for ex-servicemen and ex-servicewomen for injuries and illnesses caused or aggravated by their war service; the provision of medical treatment in certain circumstances for ex-servicemen and ex-servicewomen who are suffering from injuries and illnesses not caused or aggravated by war service; the provision of medical treatment for widows and dependants of deceased ex-servicemen whose deaths are due to war service; and a wide range of other benefits for eligible persons.

Benefits are provided in respect of service, not only in the 1914-1918 and 1939-45 Wars, but also in the South African War 1899-1902, the Korea and Malaya operations, with the British Commonwealth Far East Strategic Reserve and the Special Overseas Forces serving in prescribed areas.

For information on war service land settlement *see* Chapter 22, Rural Industry; for statistics relating to war service homes *see* Chapter 9, Housing and Building.

For detailed information about repatriation pensions, allowances, benefits and services, reference should be made to the annual reports of the Repatriation Commission.

#### Total expenditure 1970-71

#### REPATRIATION: TOTAL EXPENDITURE(a), 1966-67 TO 1970-71 (\$'000)

Class	1966-67	1967-68	1968-69	1969-70	1970-71
Pensions, allowances and other benefits . . . . .	194,783	200,446	221,678	228,309	240,539
Medical treatment . . . . .	55,897	59,645	62,743	68,395	74,627
Administration . . . . .	11,543	12,292	13,196	14,972	16,700
Works, rent and maintenance . . . . .	3,120	4,414	4,929	5,423	7,981
<b>Total expenditure . . . . .</b>	<b>265,344</b>	<b>276,797</b>	<b>302,546</b>	<b>317,098</b>	<b>339,847</b>

(a) Includes expenditure by Departments other than Repatriation as follows: 1966-67, \$3,040,306; 1967-68, \$4,330,994; 1968-69, \$4,841,789; 1969-70, \$5,298,982; 1970-71, \$5,852,357.

#### War pensions

The first provision for the payment of war pensions to ex-servicemen and their dependants was made by the Commonwealth Parliament in the *War Pensions Act* 1914. This Act was repealed in 1920 by the *Australian Soldiers' Repatriation Act* 1920 (amended from 31 December 1950 to the Repatriation Act). Amendments to the Act in 1943 considerably widened the eligibility provisions, to the benefit mainly of members of the Citizen Military Forces who had not served outside Australia during the 1939-45 War.



For a brief description of eligibility for war pensions; the conditions for payment of the various rates and allowances; and of operation of the Appeals Tribunals, see pages 91-93 of Year Book 55, Chapter 5, Repatriation.

### Pensions and allowances

War pensions and associated allowances are not subject to a means test, except in the case of dependants other than wives, widows, widowed mothers and children. Pensions and allowances payable and the main weekly rates from 30 September 1971 are as follows.

*Pensions for war-caused incapacity*—*Special rate* (totally and permanently incapacitated or blinded), \$42.50; an equivalent rate is payable for temporary total incapacity or to an ex-serviceman pensioned for pulmonary tuberculosis who is, as a result, unfit for employment; *Intermediate Rate*. (Capable of part-time work only), \$30.25; ex-servicemen pensioned for pulmonary tuberculosis and able only to work part-time receive the same rate; *General Rate* (capable of full-time employment), 100 per cent basic rate, \$12. *Dependants*—Pensions are also payable to the dependants of incapacitated ex-servicemen: Wife, \$4.05; children under 16 years, \$1.38; (Maximum rates).

*Pensions in respect of death*—*War Widows* (where death was due to war service or, at the date of death, the ex-serviceman was receiving a war pension at the special rate, or its equivalent in respect of pulmonary tuberculosis, or as a double amputee) \$17.25; eligible war widows may also receive a domestic allowance, \$8.00; *children* (under 16 years of age) \$7.00; double orphans (both parents deceased), \$14.00.

*Allowances*—various allowances are provided to supplement war pensions and these vary according to the type and severity of disablement and the special needs of the pensioner. The main allowances and maximum weekly rates payable are: *Special compensation allowance* (payable to certain general rate pensioners assessed as being 75 per cent to 100 per cent incapacitated), from \$4.50 to \$6.00; *Attendants allowance* (for the severely disabled), maximum \$16.00; *Clothing allowances* (where clothing is subject to damage from surgical aids, etc.), from 43 cents to 85 cents; *Domestic allowance* (payable to eligible war widows), \$8.00. Other allowances payable include: *Sustenance allowance*; *Fares, subsistence and attendance allowance*; *Recreation transport allowance*; *Funeral benefits, etc.*

### Summary of war pensions

The following tables provide a summary of war pensions (excluding miscellaneous war pensions) for the 1914-18 War, the 1939-45 War (including war pensions payable under the *Interim Forces Benefits Act* 1947-1966 and the *Native Members of the Forces Act* 1957-1968), the Korea and Malaya operations, the Far East Strategic Reserve, and the Special Overseas Service. Statistics relating to miscellaneous war pensions are shown later in this section.

#### WAR PENSIONS: SUMMARY, AUSTRALIA, 1970-71

		1914-18 War	1939-45 War(a)	Korea and Malaya operations	Far East Strategic Reserve	Special Overseas Service	Total
New claims granted	No.	615	11,861	674	217	3,070	16,437
Restorations.	No.	30	511	14	..	14	569
Claims disallowed(b)	No.	558	3,536	159	44	813	5,110
Pensions cancelled (gross)	No.	477	19,018	481	46	136	20,158
Deaths of pensioners	No.	5,571	6,344	52	4	19	11,990
Number of pensions in force at 30 June 1971		78,010	467,869	11,984	1,961	9,715	569,539
Annual pension liability at 30 June 1971	.\$'000	54,049	129,009	1,609	207	1,100	185,974
Amount paid in pensions during the year 1970-71	.\$,000	n.a.	n.a.	n.a.	n.a.	n.a.	191,009

(a) Includes interim forces and native members of the forces for all their disabilities disallowed.

(b) Number of ex-servicemen who had their claims

## WAR PENSIONS: SUMMARY, AUSTRALIA, 1966-67 TO 1970-71

	1966-67	1967-68	1968-69	1969-70	1970-71
New claims granted . . .	21,121	19,967	17,570	17,129	16,437
Restorations . . .	526	343	429	317	569
<i>Total additions</i> . . .	<i>21,647</i>	<i>20,310</i>	<i>17,999</i>	<i>17,446</i>	<i>17,006</i>
Pensions cancelled (gross) . . .	25,732	24,539	22,285	21,222	20,158
Deaths of pensioners . . .	10,898	10,950	11,247	11,785	11,990
<i>Total reductions</i> . . .	<i>36,630</i>	<i>35,489</i>	<i>33,532</i>	<i>33,007</i>	<i>32,148</i>

## Classes of war pensions

The following tables provide an analysis of the total number of new claims granted, pensions in force, and class of pension for 1970-71.

## WAR PENSIONS: NEW CLAIMS GRANTED, AUSTRALIA, 1970-71

<i>Class</i>	<i>1914-18 War</i>	<i>1939-45 War(a)</i>	<i>Korea and Malaya operations</i>	<i>Far East Strategic Reserve</i>	<i>Special Overseas Service</i>	<i>Total</i>
Ex-servicemen . . .	279	4,100	157	45	1,155	5,736
Wives and widows of ex-servicemen . . .	324	4,394	146	52	843	5,759
Children . . .	10	3,256	365	120	1,056	4,807
Other dependants . . .	2	111	6	..	16	135
<b>Total . . .</b>	<b>615</b>	<b>11,861</b>	<b>674</b>	<b>217</b>	<b>3,070</b>	<b>16,437</b>

(a) Includes interim forces and native members of the forces.

## WAR PENSIONS IN FORCE: AUSTRALIA, 30 JUNE 1971

<i>Class</i>	<i>1914-18 War</i>	<i>1939-45 War(a)</i>	<i>Korea and Malaya operations</i>	<i>Far East Strategic Reserve</i>	<i>Special Overseas Service</i>	<i>Total</i>
Ex-servicemen . . .	25,188	185,301	3,339	544	3,983	218,355
Wives . . .	29,048	161,362	2,665	436	2,406	195,917
Children . . .	279	85,438	5,568	895	2,941	95,121
War widows . . .	23,286	25,967	150	28	107	49,538
Children of deceased ex-servicemen . . .	30	3,984	144	49	209	4,416
Orphans . . .	11	150	5	..	1	167
Parents . . .	52	5,048	106	8	68	5,282
Others . . .	116	619	7	1	..	743
<b>Total . . .</b>	<b>78,010</b>	<b>467,869</b>	<b>11,984</b>	<b>1,961</b>	<b>9,715</b>	<b>569,539</b>

(a) Includes interim forces and native members of the forces.

**WAR PENSIONS FOR INCAPACITATED EX-SERVICEMEN IN FORCE BY CLASS OF PENSION  
AUSTRALIA, 30 JUNE 1971**

<i>Class</i>	<i>1914-18 War</i>	<i>1939-45 War(a)</i>	<i>Korea and Malaya operations</i>	<i>Far East Strategic Reserve</i>	<i>Special Overseas Service</i>	<i>Total</i>
Special rate (T.P.I.) or equivalent . . . .	7,597	14,447	102	8	33	22,187
Intermediate rate . . . .	171	1,558	20	1	4	1,754
General rate—from 10 per cent to 100 per cent assessed disability . . . . .	17,420	169,296	3,217	535	3,946	194,414
<b>Total . . . . .</b>	<b>25,188</b>	<b>185,301</b>	<b>3,339</b>	<b>544</b>	<b>3,983</b>	<b>218,355</b>

(a) Includes interim forces and native members of the forces.

**Number of war pensions and annual liability, States, etc.**

The following table shows the number of pensions in force and annual liability at 30 June 1971, according to place of payment.

**WAR PENSIONS: NUMBER OF PENSIONS AND ANNUAL LIABILITY  
STATES, ETC., 30 JUNE 1971**

<i>Place of payment</i>	<i>Number of war pensions in force at 30 June 1971(a)</i>				<i>Annual pension liability at 30 June(b) (\$'000)</i>
	<i>Incapacitated ex-servicemen</i>	<i>Dependants of incapacitated ex-servicemen</i>	<i>Dependants of deceased ex-servicemen</i>	<i>Total</i>	
New South Wales(c) . . . .	78,334	101,813	21,919	202,066	67,106
Victoria . . . . .	58,187	78,018	16,908	153,113	51,051
Queensland . . . . .	33,874	46,923	8,122	88,919	29,918
South Australia(d) . . . .	20,125	27,075	5,193	52,393	15,382
Western Australia . . . . .	18,181	24,037	4,264	46,482	12,958
Tasmania . . . . .	8,646	12,493	2,106	23,245	7,976
Overseas . . . . .	1,008	1,469	844	3,321	1,583
<b>Total . . . . .</b>	<b>218,355</b>	<b>291,828</b>	<b>59,356</b>	<b>569,539</b>	<b>185,974</b>

(a) Includes interim forces and native members of the forces 1939-45 War. (b) Includes domestic allowance payable to widows. (c) Includes Australian Capital Territory. (d) Includes Northern Territory.

**Summary of war pensions, 1966-67 to 1970-71**

The following table shows the number of pensions granted, claims rejected, pensions in force and the annual liability for pensions in each of the years ended 30 June 1967 to 1971.

**WAR PENSIONS: SUMMARY, AUSTRALIA, 1966-67 TO 1970-71**

<i>Year</i>	<i>Number of war pensions in force at 30 June(a)—</i>					<i>Total</i>	<i>Annual pension liability at 30 June(c) (\$'000)</i>
	<i>Pensions granted</i>	<i>Claims disallowed (b)</i>	<i>Incapacitated ex-servicemen</i>	<i>Dependants of incapacitated ex-servicemen</i>	<i>Dependants of deceased ex-servicemen</i>		
1966-67 . . . . .	21,121	4,819	222,912	350,365	57,897	631,174	163,388
1967-68 . . . . .	19,967	4,578	222,479	334,823	58,674	615,976	164,848
1968-69 . . . . .	17,570	4,950	221,343	319,899	59,071	600,313	171,818
1969-70 . . . . .	17,129	5,333	219,841	305,403	59,432	584,676	178,730
1970-71 . . . . .	16,437	5,110	218,355	291,828	59,356	569,539	185,974

(a) Includes interim forces and native members of the forces 1939-45 War. (b) The number of claimants who had the claims for all their disabilities disallowed. (c) Includes domestic allowance payable to widows.



The following table shows, for the years 1966-67 to 1970-71, the amounts paid in pensions and the places where they were paid.

**WAR PENSIONS: AMOUNT PAID(a), STATES, ETC., 1966-67 TO 1970-71**  
(\\$'000)

<i>Place of payment</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69(b)</i>	<i>1969-70</i>	<i>1970-71</i>
New South Wales(c)	55,884	57,424	64,981	65,469	68,992
Victoria	46,882	47,146	51,566	51,214	52,546
Queensland	24,992	25,525	28,543	29,055	30,813
South Australia(d)	13,613	13,807	15,326	15,151	15,722
Western Australia	11,869	11,914	13,038	12,786	13,114
Tasmania	6,650	6,786	7,617	7,831	8,226
Overseas	1,509	1,519	1,414	1,580	1,595
<b>Total</b>	<b>161,399</b>	<b>164,121</b>	<b>182,485</b>	<b>183,086</b>	<b>191,008</b>

(a) Includes domestic allowances paid to widows. (b) Includes five 12-weekly payments. (c) Includes Australian Capital Territory. (d) Includes Northern Territory.

**Miscellaneous war pensions**

The Commission is also responsible for the payment of pensions and allowances to beneficiaries under the *Seamen's War Pensions and Allowances Act* 1940-1971 and Cabinet decisions granting eligibility to persons who were attached to the armed forces during war-time.

The following table shows the number and class of pensions and the annual liability at 30 June 1971, and the table thereafter shows the amounts paid during the years 1966-67 to 1970-71 and the place of payment.

**MISCELLANEOUS WAR PENSIONS: NUMBER OF PENSIONS AND ANNUAL LIABILITY, AUSTRALIA, 30 JUNE 1971**

<i>Class</i>	<i>Number of pensions in force at 30 June 1971</i>				<i>Annual pension liability at 30 June (\$'000)</i>
	<i>Members(a)</i>	<i>Dependants of members</i>	<i>Dependants of deceased members</i>	<i>Total</i>	
Act of grace	119	137	53	309	140
Seamen's war pension	81	94	68	243	94
New Guinea civilians	2	..	67	69	83
<b>Total</b>	<b>202</b>	<b>231</b>	<b>188</b>	<b>621</b>	<b>317</b>

(a) 'Member' in this context is a person in respect of whose wartime experience a pension is paid.

**MISCELLANEOUS WAR PENSIONS: AMOUNT PAID, STATES, ETC.**  
**1966-67 TO 1970-71**  
(\\$'000)

<i>Place of payment</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69(a)</i>	<i>1969-70</i>	<i>1970-71</i>
New South Wales(b)	148	159	174	176	179
Victoria	71	71	87	84	90
Queensland	44	44	46	47	50
South Australia(c)	29	29	30	31	32
Western Australia	20	20	23	25	26
Tasmania	4	4	4	4	4
Overseas	1	1	1	1	1
<b>Total</b>	<b>317</b>	<b>328</b>	<b>365</b>	<b>368</b>	<b>382</b>

(a) Includes five 12-weekly payments. (b) Includes Australian Capital Territory. (c) Includes Northern Territory.

### Service pensions

The *Repatriation Act* 1920-1971 provides for a service pension to be paid, subject to a means test on income and property, to the following persons:

- ex-servicemen who served in a theatre of war (or in a designated *Operational* or *Special Overseas Service* area) and have attained the age of sixty years or are permanently unemployable;
  - ex-servicemen who suffer from pulmonary tuberculosis, irrespective of the area of their service; and
  - ex-servicewomen who suffer from tuberculosis, or who served in a theatre of war, or served abroad or embarked for service abroad and have attained the age of fifty-five years, or are permanently unemployable.
- veterans of the South African War 1899-1902 who were members of a naval or military force or contingent raised in Australia for active service in that war.

#### Rates of pension

Maximum service pension rates and allowances are the same as those paid to Age and Invalid pensioners under the Social Services Act. The means test provisions relating to payments are similar.

For information on conditions relating to the various rates and allowances and the operation of the means test, see Chapter 13, Welfare Services.

From 30 September 1971, the maximum weekly rates are as follows.

*Standard (Single) Rate*, \$17.25, *Standard (Married) Rate* (wife not eligible for Age or Invalid pension) Husband \$17.25; wife if otherwise eligible, \$8, *Married Rate* (wife receiving Age or Invalid pension from Department of Social Services), \$15.25; *Guardian's Allowance*, \$4 (\$6 if caring for a child under 6 years or an invalid child requiring full time care); *Supplementary assistance*, \$2; *Additional pension for eligible children*, \$4.50 for each child; In addition \$0.25 is payable in respect of the 2nd, 3rd and 4th children.

An ex-serviceman or ex-servicewoman in receipt of a service pension is entitled, with certain exceptions, to free medical benefits for disabilities not caused by war service. These benefits include general practitioner service, specialist service where necessary, full pharmaceutical benefits, surgical aids and appliances (including spectacles), dental treatment, and treatment in Repatriation General Hospitals.

#### SERVICE PENSIONS, SUMMARY, AUSTRALIA, 1970-71

	South African War	1914-18 War	1939-45 War(a)	Korea- Malaya operations	Special Overseas Service	Miscel- laneous (b)	Total
New claims granted . . . .	6	1,380	8,859	65	2	9	10,321
Restorations . . . . .	..	177	500	3	..	..	680
Cancellations (gross) . . . .	..	843	2,521	14	..	..	3,378
Deaths . . . . .	23	3,343	1,901	7	..	2	5,276
Pensions in force at 30 June 1971	132	34,888	41,517	225	3	43	76,808
Annual liability at 30 June 1971							
\$'000	75	20,859	22,289	90	2	20	43,334
Amount paid in pensions during 1970-71 . . . . \$'000	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	43,732

(a) Includes native members of the forces.

(b) Act of grace pensions.

#### SERVICE PENSIONS: SUMMARY, AUSTRALIA, 1966-67 TO 1970-71

	1966-67	1967-68	1968-69	1969-70	1970-71
New claims granted . . . . .	8,578	8,880	7,479	13,259	10,321
Restorations . . . . .	1,056	1,052	780	1,642	680
<i>Total additions</i> . . . . .	9,634	9,932	8,259	(a)14,901	11,001
Cancellations (gross) . . . . .	4,197	4,017	5,009	2,858	3,378
Deaths . . . . .	4,362	4,373	4,601	4,781	5,276
<i>Total reductions</i> . . . . .	8,559	8,390	9,610	7,639	8,654

(a) Part of the increase in 1969-70 is due to variation in the Means Test in September 1969. See Chapter 13—Welfare Services.

**Class of service pensions**

The following tables give an analysis of the total number of new claims granted and pensions in force for 1970-71.

**SERVICE PENSIONS: NEW CLAIMS GRANTED, AUSTRALIA, 1970-71**

<i>Class</i>	<i>South African War</i>	<i>1914-18 War</i>	<i>1939-45 War(a)</i>	<i>Korea-Malaya operations</i>	<i>Special Overseas Service</i>	<i>Miscellaneous</i>	<i>Total</i>
Ex-servicemen . . .	6	975	6,120	32	2	9	7,144
Wives and widows of ex-servicemen . . .	..	397	2,082	13	..	..	2,492
Children . . .	..	8	657	20	..	..	685
<b>Total . . .</b>	<b>6</b>	<b>1,380</b>	<b>8,859</b>	<b>65</b>	<b>2</b>	<b>9</b>	<b>10,321</b>

(a) Includes native members of the forces.

**SERVICE PENSIONS: NUMBER IN FORCE, STATES, 30 JUNE 1971**

<i>State</i>	<i>South African War</i>	<i>1914-18 War</i>	<i>1939-45 War(a)</i>	<i>Korea-Malaya operations</i>	<i>Special Overseas Service</i>	<i>Miscellaneous</i>	<i>Total</i>
New South Wales(b)	26	11,078	12,936	82	..	6	24,128
Victoria . . .	21	9,676	9,092	41	1	16	18,847
Queensland . . .	27	5,649	9,170	53	1	8	14,908
South Australia(c)	27	4,018	3,886	23	..	7	7,961
Western Australia . .	27	3,198	4,517	20	1	4	7,767
Tasmania . . .	4	1,269	1,916	6	..	2	3,197
<b>Australia . . .</b>	<b>132</b>	<b>34,888</b>	<b>41,517</b>	<b>225</b>	<b>3</b>	<b>43</b>	<b>76,808</b>

(a) Includes native members of the forces.

(b) Includes Australian Capital Territory.

(c) Includes Northern Territory.

**Number, by class, of service pensions and amount paid**

The following tables show the number of each class of service pension in force, the annual liability and the amounts paid for the years 1966-67 to 1970-71.

**SERVICE PENSIONS: NUMBER OF EACH CLASS OF PENSION AND ANNUAL LIABILITY AUSTRALIA, 1966-67 TO 1970-71**

*Number of service pensions at 30 June payable to—*

<i>Year</i>	<i>Ex-servicemen who are—</i>		<i>Dependants(a) of ex-servicemen where the ex-serviceman is—</i>				<i>Miscellaneous</i>	<i>Total</i>	<i>Annual pension liability at 30 June (\$'000)</i>
	<i>Aged ex-servicemen</i>	<i>Permanently unemployable</i>	<i>Suffering from pulmonary tuberculosis</i>	<i>An aged ex-serviceman</i>	<i>Permanently unemployable</i>	<i>Suffering from pulmonary tuberculosis</i>			
1966-67 .	34,814	14,512	1,073	433	14,988	1,152	21	66,993	31,239
1967-68 .	35,254	14,874	1,049	631	15,606	1,091	22	68,527	31,436
1968-69 .	35,404	14,797	1,060	537	14,373	975	22	67,168	33,273
1969-70 .	37,792	17,362	1,154	821	16,237	1,023	31	74,420	40,929
1970-71 .	38,666	18,122	1,201	1,017	16,729	1,030	43	76,808	43,334

(a) Includes dependants of deceased service pensioners.



**SERVICE PENSIONS: AMOUNT PAID, STATES, ETC.**  
**1966-67 TO 1970-71**  
 (\$'000)

<i>Place of payment</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
New South Wales(a)	9,998	10,844	11,358	12,806	13,963
Victoria	6,720	7,420	8,070	9,767	10,696
Queensland	4,715	5,292	5,799	7,184	8,042
South Australia(b)	3,134	3,416	3,710	4,253	4,651
Western Australia	3,612	3,777	4,071	4,491	4,769
Tasmania	935	1,014	1,093	1,404	1,604
Overseas	11	8	7	8	7
<b>Australia</b>	<b>29,126</b>	<b>31,771</b>	<b>34,108</b>	<b>39,912</b>	<b>43,732</b>

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

### Medical treatment for ex-servicemen and dependants of ex-servicemen

Medical treatment is provided for all disabilities which have been accepted as due to war service. In addition, and subject to certain conditions, treatment is provided for disabilities not due to war service for: ex-servicemen and ex-servicewomen receiving war pensions at or exceeding the maximum general (100 per cent) rate; ex-servicemen who have contracted pulmonary tuberculosis; nurses who served in the 1914-18 war; widows and certain dependants of ex-servicemen whose deaths have been accepted as due to war service and of deceased T.P.I. pensioners; and certain service pensioners, including service pensioners of the South African War 1899-1902. Ex-servicemen who have contracted pulmonary tuberculosis may receive treatment for that condition.

In-patient treatment for eligible patients is provided at the six Repatriation General Hospitals (one in each State) and seven auxiliary hospitals and sanatoriums as follows: *New South Wales*—Lady Davidson Hospital; *Victoria*—Macleod Hospital and Anzac Hostel; *Queensland*—Kenmore Hospital and Rosemount Hospital; *South Australia*—Birrlee Hospital; and *Western Australia*—The Edward Millen Hospital. The Anzac Hostel specialises in the care and treatment of long-term patients.

The total number of available beds for patients in wards or parts of wards, open for use, in all these institutions at 30 June 1971 was 3,737, and expenditure during 1970-71 amounted to \$35,019,443. In addition, expenditure of \$39,607,306 was incurred during 1970-71 on medical services outside these institutions.

#### Repatriation hospitals and institutions

Details of full-time staff in Repatriation general hospitals and other Repatriation institutions are given in the following table.

**REPATRIATION HOSPITALS AND INSTITUTIONS: FULL-TIME STAFF**  
**STATES, 30 JUNE 1971**

<i>Type of institution</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
General hospitals—							
Medical staff . . . .	118	104	54	28	31	9	344
Nursing staff . . . .	686	468	365	178	187	58	1,942
Other staff . . . . .	1,098	758	477	323	401	116	3,173
<i>Total, general hospitals</i>	<i>1,902</i>	<i>1,330</i>	<i>896</i>	<i>529</i>	<i>619</i>	<i>183</i>	<i>5,459</i>
Other in-patient institutions(a)	223	121	178	36	42	..	600
Out-patient clinics(a)	161	73	25	41	28	..	328
Limb and appliance centres(a)	69	66	28	17	15	12	207
<b>Grand total</b>	<b>2,355</b>	<b>1,590</b>	<b>1,127</b>	<b>623</b>	<b>704</b>	<b>195</b>	<b>6,594</b>

(a) Total staff.

The following table gives details of in-patients treated at Repatriation general hospitals and other Repatriation institutions in each State. The figures shown refer to cases, e.g. a person who is admitted to hospital twice during a year is counted twice.

**REPATRIATION GENERAL HOSPITALS AND INSTITUTIONS: IN-PATIENTS  
TREATED, STATES, 1970-71**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
<b>REPATRIATION GENERAL HOSPITALS</b>							
In-patients at beginning of year . . . . .	939	557	512	293	328	81	2,710
Admissions and re-admissions during year . . . . .	17,200	10,195	8,794	5,626	5,548	1,532	48,895
<i>Total in-patients treated</i> . . . . .	<i>18,139</i>	<i>10,752</i>	<i>9,306</i>	<i>5,919</i>	<i>5,876</i>	<i>1,613</i>	<i>51,605</i>
Discharges . . . . .	16,193	9,347	8,510	5,314	5,243	1,445	46,052
Deaths . . . . .	971	819	401	347	342	80	2,960
In-patients at end of year . . . . .	975	586	395	258	291	88	2,593
Average daily beds occupied . . . . .	905	542	428	259	293	83	2,510
<b>OTHER REPATRIATION INSTITUTIONS</b>							
In-patients at beginning of year . . . . .	189	118	132	27	45	..	511
Admissions and re-admissions during year . . . . .	2,074	802	1,107	111	331	..	4,425
<i>Total in-patients treated</i> . . . . .	<i>2,263</i>	<i>920</i>	<i>1,239</i>	<i>138</i>	<i>376</i>	<i>..</i>	<i>4,936</i>
Discharges . . . . .	1,998	761	1,069	100	331	..	4,259
Deaths . . . . .	77	42	41	2	3	..	165
In-patients at end of year . . . . .	188	117	129	36	42	..	512
Average daily beds occupied . . . . .	203	111	131	25	40	..	510

In addition to the Repatriation institutions, eligible patients are treated in other country and metropolitan hospitals and nursing homes at Repatriation expense. During 1970-71, 18,010 Repatriation in-patients were accommodated and treated in hospitals and 1,116 in nursing homes.

Repatriation psychiatric patients requiring custodial care are, by agreement with the State Governments, accommodated at the expense of the Repatriation Department in separate wings of psychiatric hospitals administered by the State authorities. Excluding 127 on trial leave, there were 724 Repatriation patients in these hospitals at 30 June 1971.

Out-patient treatment is provided throughout the Commonwealth at Repatriation hospitals and clinics and through the Repatriation Local Medical Officer Scheme. During 1970-71, 627,398 out-patients were treated at Repatriation institutions, and visits to or by local medical officers totalled 2,752,919. The number of Repatriation local medical officers in the Commonwealth at 30 June 1971 was 6,206.

#### Artificial limb and appliance services

In each State the Repatriation Department maintains a limb and appliance centre, catering for patients requiring artificial limbs, surgical aids and appliances. The centres fit eligible Repatriation patients and those from other Commonwealth departments and instrumentalities, and, when possible, patients from State Government and philanthropic organisations, and private persons who cannot be fitted satisfactorily elsewhere.

Details of production at all centres during 1970-71 are as follows: arms, 206; legs, 1,724; surgical footwear, 8,534; adapted footwear, 1,716; other surgical appliances, 2,478; and repairs, 27,597.

### General Repatriation benefits and miscellaneous

#### Other Repatriation Department activities

In addition to the payment of pensions and the provision of medical treatment, the Department also provides various benefits and allowances designed to meet the needs of special classes of ex-servicemen and their dependants.

These include educational and vocational training schemes, namely the *Soldiers' Children Education Scheme* (full details of which appear later in this section), the *Disabled Members' Training Scheme*, the *War Widows' Training Scheme* and the *National Service Vocational Training Scheme*.

In addition, gift cars and an annual allowance for their upkeep are provided for ex-servicemen who, as a result of war service, have suffered the amputation of both legs above the knees or amputation of one leg above the knee plus any two other amputations (above the ankle or at or above the wrist) or complete paraplegia resulting in the total loss of the use of both legs. A grant of up to \$50 may be made towards the funeral expenses of eligible ex-servicemen and certain of their dependants. Payment of up to \$10 may be made to provide such necessities as meals, sleeping accommodation etc., for ex-servicemen in need of immediate relief. Also certain concessions in telephone rental charges are provided for some classes of ex-servicemen and their dependants, including war blinded ex-servicemen, war widows and certain service and special rate war pensioners. Ex-servicemen who have been blinded as a result of war service may be issued with talking book machines. The Australian Red Cross Society supplies 'book' records or cassettes for these machines, free of charge, thus enabling the blinded to enjoy a wide range of literature.

Expenditure in 1970-71 on general Repatriation benefits for all wars was \$5,417,000, comprising Soldiers' Children Education Scheme, \$3,407,000; recreation transport allowance, \$739,000; and other benefits \$1,271,000.

Trust (and other) funds administered by the Repatriation Department held \$11,770,000 in securities (face value) and \$800,000 in cash, a total of \$12,570,000 as at 30 June 1971.

Reciprocal arrangements with the United Kingdom, New Zealand and other countries provide for the payment of pensions, etc., to eligible Australian ex-servicemen living overseas and to eligible ex-servicemen from overseas who are living in Australia.

#### **Soldiers' Children Education Scheme**

The Soldiers' Children Education Scheme was established in 1921 and operates with the assistance of the voluntary Education Boards in each State. These Boards consist of representatives of government and non-government education authorities and of ex-service and other organisations which have a general interest in the welfare of the children of ex-servicemen. The objects of the Scheme are to assist and encourage eligible children in acquiring a standard of education compatible with their aptitude and ability, and to prepare them to enter an agricultural, commercial, professional, or industrial calling of their own choice. Eligible children are children of ex-servicemen whose deaths have been accepted as due to war service; or of ex-servicemen who died from causes not due to war service but who were receiving at the date of death a war pension at a special rate for blindness, total and permanent incapacity, pulmonary tuberculosis, or amputation of two or more limbs; or of ex-servicemen who, as a result of war service, are blinded, totally and permanently incapacitated, or receiving the special rate pension for pulmonary tuberculosis and are likely to receive such pension for a period of at least three years. From the commencement of primary education up to twelve years, school requisites and fares are provided. An education allowance is also payable for a child from commencement of secondary education or from the age of twelve years, whichever is the earlier, while the child is undertaking primary or secondary education. Further assistance beyond, or parallel with, the later years of secondary education is provided where an approved beneficiary continues with a course of specialised education or training necessary for a career. At this stage of training, in addition to the education allowance, fees are paid and text books, essential equipment and other minor benefits are provided.

All education allowances are subject to an allowed income limit test, i.e. the amount of education allowance payable depends on the amount of income a child receives over the allowed limit. The scale of maximum allowances payable to eligible children at various stages of education is as follows.

#### **SOLDIERS' CHILDREN EDUCATION SCHEME WEEKLY RATES OF ALLOWANCES, FROM 1 JANUARY 1972 (\$)**

<i>Type of training</i>	<i>Living at home</i>	<i>Living away from home</i>
At school—		
Aged 12 and under 14 years . . .	2.18	7.28
Aged 14 „ „ 16 years . . .	3.30	7.28
Aged 16 „ „ 18 years . . .	7.28	11.25
Professional (university, etc.) . . .	13.46	21.16
Agricultural . . .	..	3.65
Industrial (apprenticeship, etc.) . . .	2.65	5.30



The following tables show the costs of education under the scheme for the year ended 30 June 1971 and the number of children in receipt of benefit at 30 June 1971.

**SOLDIERS' CHILDREN EDUCATION SCHEME: EXPENDITURE, 1970-71**  
(\\$'000)

	<i>N.S.W.(a)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(b)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
Cost of education of beneficiaries—							
Under 12 years of age . . .	7	7	9	1	1	2	27
12 years of age and over . . .	1,255	872	617	301	172	150	3,367
<b>Total expenditure . . .</b>	<b>1,262</b>	<b>879</b>	<b>626</b>	<b>302</b>	<b>173</b>	<b>152</b>	<b>(c)3,394</b>

(a) Includes Australian Capital Territory.  
of \$13,000.

(b) Includes Northern Territory.

(c) Excludes overseas expenditure

**SOLDIERS' CHILDREN EDUCATION SCHEME: NUMBER RECEIVING BENEFITS(a)**  
**AT 30 JUNE 1971**

<i>Type of training</i>	<i>N.S.W. (b)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A. (c)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Over- seas</i>	<i>Total</i>
At school—								
Aged under 14 years(d) . . .	666	454	403	166	113	110	10	1,922
Aged 14 and under 16 years . . .	828	606	444	235	131	152	14	2,410
Aged 16 and under 18 years . . .	898	522	235	149	79	80	18	1,981
<b>Total at school . . .</b>	<b>2,392</b>	<b>1,582</b>	<b>1,082</b>	<b>550</b>	<b>323</b>	<b>342</b>	<b>42</b>	<b>6,313</b>
Professional . . . . .	480	389	289	157	95	52	11	1,473
Agricultural . . . . .	5	6	15	3	3	..	..	32
Industrial . . . . .	..	3	..	..	..	..	..	3
<b>Grand total . . . . .</b>	<b>2,877</b>	<b>1,980</b>	<b>1,386</b>	<b>710</b>	<b>421</b>	<b>394</b>	<b>53</b>	<b>7,821</b>

(a) Refers only to children in receipt of an education allowance. (b) Includes Australian Capital Territory.  
(c) Includes Northern Territory. (d) From 12 years of age or the commencement of secondary education, whichever is the earlier.

### Settlement of returned service personnel on the land

Reference to the settlement of returned service personnel on the land will be found in the chapter Rural Industry.

### Re-establishment benefits for national servicemen

Subject to prescribed conditions, special re-establishment benefits are provided for national servicemen under the *Defence (Re-establishment) Act* 1965–1968. They apply to all national servicemen whether or not they have served on 'special service' and ensure that servicemen will not be at a disadvantage on their return to civil life. The scheme includes appropriate full or part-time training where it is necessary or desirable for effective re-settlement. The assistance includes payment of tuition fees, other associated fees and fares, and an allowance towards the provision of books and equipment as appropriate. A training allowance is also provided for trainees undertaking full-time studies.

Re-establishment loans may be granted, subject to certain conditions, to those national servicemen in need of financial assistance for their re-establishment in civil life and who, prior to call-up, were engaged on their own account in professional practice, business, or agricultural occupations, or who, because of their call-up, were prevented from engaging in these occupations or, in any other case where it is considered desirable in the circumstances to grant a loan.

The maximum amounts of the loans are business and professional \$3,000, agricultural \$6,000.

### The Services Canteens Trust Fund

The Services Canteens Trust Fund was established under the *Services Trust Funds Act 1947*. Its funds are derived from the assets and profits of wartime services canteens, mess and regimental funds of disbanded units, and several other sources.

The total amount transferred to the Fund to 31 December 1971 was \$11,056,551. The Act prescribed that, of this, \$5 million and such further amounts as the trustees of the Fund might from time to time decide, should be devoted to the provision of education facilities for the children of eligible ex-servicemen and ex-servicewomen, and that the balance of the Fund should be used to provide relief for ex-servicemen and ex-servicewomen and their dependants in necessitous circumstances.

The Fund is administered by ten honorary trustees appointed by the Governor-General. The trustees have power to determine the persons or groups of persons to benefit from the Fund and the extent of the benefits to be granted within the provisions of the Act, and to appoint regional committees to assist with the administration. Members of regional committees are all persons who served in the 1939-45 War or are widows of men who served during the war. The trustees and members of regional committees serve in an honorary capacity.

#### Assistance from the Fund

Persons eligible for assistance from the Fund are those who, between 3 September 1939 and 30 June 1947, served in the Australian Naval, Military or Air Forces, including members of the canteens staff of any ship of the Royal Australian Navy, persons duly accredited to any part of the Defence Forces who served in an official capacity on full-time paid duty, and their dependants. The trustees have introduced schemes for providing welfare relief for ex-servicemen and ex-servicewomen who are eligible for benefits, and for their dependants; benefits for children of eligible ex-servicemen and ex-servicewomen who are suffering from serious and incapacitating afflictions; and education benefits for the children of eligible ex-servicemen and ex-servicewomen. From its inauguration in 1947 the Fund is to be available for forty years for both welfare relief and educational benefits.

The total assistance granted under these three schemes from the inception of the Fund to 31 December 1971 was \$12,258,076 (\$446,014 during 1971) distributed as follows: *Welfare relief*, \$3,751,346 (\$148,000); *Assistance for afflicted children*, \$330,520 (\$7,430); and *Educational assistance*, \$8,176,210 (\$290,584).

For detailed information on the operation of the Fund reference should be made to the annual reports of the Services Canteens Trust Fund.

## CHAPTER 6

### INTERNATIONAL RELATIONS

#### Relations with Commonwealth and other countries

Australia's international relations have developed steadily since its attainment of nationhood at the beginning of this century. Initially, association with Britain and co-operation with the Commonwealth countries were a major preoccupation. These links still remain an important element of foreign policy. Australia now maintains particularly close relations with the United States of America and places considerable importance on its growing association with the countries of Asia.

##### Commonwealth relations

In addition to being represented at the meetings of Commonwealth Heads of Government, at meetings of Finance, Trade, Education and other Ministers, Australia maintains close co-operation with other Commonwealth countries, having High Commissions in seventeen of them. Australia is also a member of the main Commonwealth organisations and participates in intra-Commonwealth schemes providing for co-operation in economic, scientific, educational, cultural, and other fields.

##### Relations with the Americas

An important feature of Australia's international relations is its relationship with the United States of America. This relationship is formally expressed in the ANZUS Treaty which was signed pursuant to Article 51 and 52 of the United Nations Charter. It provides for regular consultations between these three parties that, in the event of armed attack on any one of them in the Pacific, the United States, Australia, and New Zealand would each act to meet the common danger in accordance with its constitutional processes.

Australia enjoys long-standing relations with Canada, a fellow member of the Commonwealth. Its relations with the other countries of the Americas are expanding, particularly in the trade field, and this is reflected in the existence of Australian diplomatic missions in, or concurrently accredited to, a number of these countries.

##### Australia and Asia

Relations with the neighbouring countries of Asia are an increasingly important element in Australia's foreign policy. Australia is active as a member of the South-East Asia Treaty Organisation (SEATO), as a regional member of the United Nations Economic Commission for Asia and the Far East (ECAFE), as a member of the Colombo Plan Consultative Committee, of the Asian Development Bank, and of the Asian and Pacific Council (ASPAC). Australia also maintains an active bilateral relationship with most countries in the region. The Australian Territory of Papua New Guinea was admitted to ECAFE as a separate member in July 1970.

##### Relations with the South Pacific

Australia's long-standing associations with the countries of the South Pacific include a particularly close relationship with New Zealand and membership of the South Pacific Commission, the regional organisation established in 1947 to promote the economic and social development of the Pacific Islands. Australia has welcomed the attainment of full independence by Fiji, Nauru, Tonga and Western Samoa, and has supported the South Pacific forum which met for the first time in Wellington, New Zealand in 1971 and in Canberra in 1972.

##### Relations with Europe

Australia's geographical remoteness from Europe has not prevented recognition of the latter's importance and the traditional links of migration, culture, trade and investment have been strengthened by Australian participation in various European economic and scientific organisations.



### Relations with Africa and Middle East

Australia has significant trade and communications interests in Africa and the Middle East. It is represented in some of the countries by diplomatic and trade missions and maintains relations with others through visits by representatives and consultations in capitals where both are represented. Under the Special Commonwealth African Assistance Programme and the Australian International Award Scheme, a small proportion of Australian external aid is extended to several countries in the area.

### United Nations

From the time of the drafting of the United Nations Charter, Australia has taken an active role in the United Nations, primarily through participation in the General Assembly but also through membership of the Security Council (1946–47 and 1956–57), the Economic and Social Council (1948–50, 1953–55 and 1962–64), and the Trusteeship Council.

Contributions are made to various forms of international aid through the United Nations and its specialised agencies.

### SEATO

The South-East Asian Treaty Organisation (SEATO) was established to give effect to the objectives of the Manila Treaty signed on 8 September 1954 by Australia, France, New Zealand, Pakistan, The Philippines, Thailand, the United Kingdom and the United States of America. Primarily a collective defence alliance designed to promote the peace and security of the South-East Asian region (a protocol to the treaty extends its operation to Cambodia (now Khmer Republic) Laos and Vietnam, should these governments request aid). SEATO also has programmes to improve the security and the economic and social well-being of the countries within the Treaty Area. The SEATO Council meets annually.

Australia participates in a broad range of SEATO activities, including the Military Planning Office, the Civil Secretariat, military exercises and meetings of committees, seminars and expert study groups. Since 1956, over \$26 million has been provided under various SEATO aid projects.

## Participation in the United Nations

### Australia's contributions to the United Nations

Australia played an active part in drafting the Charter of the United Nations at the Conference on International Organization in San Francisco in 1945 and has been a consistent supporter of the principles and objectives of the United Nations since its foundation. Australia's influence in the affairs of the United Nations has been exerted primarily through the annual debates in the General Assembly, through membership of the Security Council (1946–47 and 1956–57) and the Economic and Social Council (1948–50, 1953–55 and 1962–64), and through the Trusteeship Council. By virtue of responsibility for the administration of the Trust Territory of Nauru prior to Nauru's independence in January 1968 and the continuing administration of the Trust Territory of New Guinea, Australia has been a member of the Trusteeship Council, as an administering power, since the Council's establishment.

In 1950 Australia joined fifteen other member States in answering the Security Council's call to help the Republic of Korea to repel Communist aggression from the north, and members of all three armed services took part in the three years of fighting which followed. Australia has also been directly involved in United Nations activities in many other parts of the world and has contributed its share of the costs, both assessed and voluntary, of all United Nations peace-keeping operations. The largest of which have been the United Nations Emergency Force (UNEF) in the Middle East in 1956–57, the United Nations Operation in the Congo (ONUC) in 1960–64, and the United Nations Force in Cyprus (UNFICYP) since 1964. In addition to financial contributions, an element of forty Australian policemen has been made available for service with UNFICYP.

Australia was a member, in 1968, of the Ad Hoc Committee on the Sea-bed and was appointed to membership of the Permanent Committee established by the Twenty-third General Assembly. In 1969–70 Australia was a member of the Committee on Defining Aggression.

In the economic, social and cultural sphere Australia has contributed to the work of the United Nations through membership of its specialised agencies, of the Economic and Social Council and of the United Nations Conference on Trade and Development (UNCTAD). Australia has been a member of the Trade and Development Board since its inception in 1963. It is a foundation member

of one of the four Regional Economic Commissions—the Economic Commission for Asia and the Far East, the 4th, 15th and 23rd Sessions of which were held in Australia. In 1963 Australia became a regional member of ECAFE and in 1970 became a member of the Preparatory Committee for the Second United Nations Development Decade: In 1970 Australia was elected to serve on the ECOSOC Committee on Natural Resources for a four-year term, and on the Committee on Housing, Building and Planning for three years; in 1971 it was elected to a three-year term on the Governing Council of the United Nations Development Programme (UNDP).

Australia has had various periods of service as a member of the executive bodies of the principal specialised agencies. As a leading agricultural country, it played a large part in the establishment of the Food and Agriculture Organisation (FAO) and the tenth Regional FAO Conference for Asia and the Far East was held in Canberra in August-September 1970. At the 16th Session of FAO held in Rome in 1971, Australia was elected to the FAO Council. Australia is a member of the Board of Governors of the International Atomic Energy Agency and it served as a member of the governing body of the International Labour Organisation either as a titular government member or as a deputy member from 1945 to 1960 and from 1963 to 1969. Australia is also a member of the Executive Board of the World Health Organization, the Administrative Council of the International Telecommunications Union, the Executive Committee of the World Meteorological Organization and the Council of the Inter-Governmental Maritime Consultative Organization. It was elected to the Executive Council, the Consultative Committee for Postal Studies, the Management Council of the Universal Postal Union as well as to the United Nations Commission on International Trade Law.

Australia has also been a prominent member of the International Civil Aviation Organization since its inception, and in 1962 was re-elected to the Council as one of the nine States of principal civil aviation importance. It was a member of the executive board of the United Nations Children's Fund (UNICEF) from 1947 to 1961 and from 1966 to 1969. Australia is on the Executive Committee of the High Commissioner for Refugees.

### **Australia's contributions in international aid**

It is not possible to calculate precisely the total amount of financial assistance which Australia provides to developing countries, including Papua New Guinea, by way of aid from the Commonwealth Budget each year. There is also scope for differences of opinion about what constitutes 'aid'. Nevertheless, it can be said that, all told, the Commonwealth Government will provide well over \$200 million for aid of one kind or another to developing countries, including Papua New Guinea in 1971-72.

The table below lists various items of expenditure which can be fairly readily identified as economic (i.e. non-military) aid to developing countries:

**AUSTRALIA'S CONTRIBUTION IN INTERNATIONAL AID, 1966-67 TO 1970-71**  
(**\$'000**)

	1966-67	1967-68	1968-69	1969-70	1970-71
<b>Bilateral programmes—</b>					
Colombo Plan—					
Projects, equipment, experts and training . . . . .	12,713	13,431	12,901	15,186	16,846
Special aid to Indonesia . . . . .	..	4,750	5,916	7,881	7,721
SEATO Aid Programme . . . . .	2,309	2,498	2,389	2,398	1,891
Indus Waters Scheme . . . . .	1,749	1,996	2,137	293	663
Emergency Food Aid—India . . . . .	9,479	9,500	..	..	..
International Grains Arrangement—					
Food Aid Convention . . . . .	..	..	11,853	11,578	11,840
Laos Foreign Exchange Operations Fund . . . . .	612	535	723	643	643
Special Commonwealth African Assistance Programme . . . . .	427	423	411	495	497
Commonwealth Co-operation in Education(a) . . . . .	700	753	749	885	732
South Pacific Aid Programme . . . . .	167	416	407	495	543
Special Aid to Vietnam . . . . .	..	..	..	..	390
Special Aid to Khmer Republic . . . . .	..	..	..	..	960
Other . . . . .	126	97	166	508	548
<i>Total bilateral aid . . . . .</i>	<i>28,282</i>	<i>34,399</i>	<i>37,653</i>	<i>40,362</i>	<i>43,274</i>
<b>Multilateral programmes—</b>					
International Financial Institutions—					
IDA (International Development Association)(b) . . . . .	6,005	7,134	2,020	2,820	2,815
ADB (Asian Development Bank)(b) . . . . .	3,795	3,795	7,589	3,795	4,120
United Nations Programmes—					
UNDP (UN Development Programme) . . . . .	1,170	1,292	1,241	1,549	1,785
UNRWA (UN Relief and Works Agency) . . . . .	180	180	180	180	180
UNHCR (UN High Commissioner for Refugees) . . . . .	135	134	135	175	262
UNICEF (UN Children's Fund) . . . . .	480	480	480	550	825
World Food Programme . . . . .	492	698	692	1,000	963
Other . . . . .	65	15	338	412	508
<i>Total multilateral aid . . . . .</i>	<i>12,322</i>	<i>13,728</i>	<i>12,675</i>	<i>10,480</i>	<i>11,458</i>
<b>Papua New Guinea(c)—</b>					
Grant to Administration . . . . .	69,784	77,594	86,994	95,999	101,497
Expenditure by other Departments . . . . .	14,000	14,000	12,382	18,885	20,471
<i>Total Papua New Guinea aid . . . . .</i>	<i>83,784</i>	<i>91,594</i>	<i>99,376</i>	<i>114,884</i>	<i>121,968</i>
<b>Total international aid . . . . .</b>	<b>124,388</b>	<b>139,721</b>	<b>149,704</b>	<b>165,726</b>	<b>176,700</b>

(a) Administered principally by the Department of Education and Science. (b) The Department of the Treasury has the principal responsibility for the management of Australia's participation in these organisations. (c) The grant to assist the economic development of the Territory of Papua New Guinea is administered principally by the Department of External Territories.

The current level of Australia's aid represents about \$13 per head of its population and is 0.59 per cent of its gross national product. On a world comparison of official assistance flows, Australia is ranked among the first three aid donors.

Some two-thirds of Australia's aid is channelled to Papua New Guinea (See Chapter 28, The Territories of Australia). The remainder is channelled through multilateral programmes (e.g. through the World Bank, U.N. Agencies and the Asian Development Bank) and through bilateral programmes. The following table sets out the geographic distribution of Australia's bilateral aid.



**AUSTRALIA'S BILATERAL AID BY GEOGRAPHICAL REGION AND COUNTRY**  
(S'000)

<i>Country</i>	<i>Cumulative total ex- penditure to 30 June 1970</i>	<i>Expendi- ture 1970-71</i>	<i>Country</i>	<i>Cumulative total ex- penditure to 30 June 1970</i>	<i>Expendi- ture 1970-71</i>
<b>ASIA—</b>			<b>SOUTH PACIFIC—continued</b>		
Afghanistan . . .	879	78	Gilbert and Ellice Islands . . .	230	87
Bhutan . . .	457	147	New Hebrides . . .	82	20
Brunei . . .	83	..	Tonga . . .	305	124
Burma . . .	9,146	1,300	Western Samoa . . .	489	126
Ceylon . . .	14,626	1,002	Miscellaneous . . .	48	8
India . . .	83,430	4,876	<i>Total . . .</i>	<i>3,487</i>	<i>1,341</i>
Indonesia . . .	47,912	15,512	<b>AFRICA—</b>		
Iran . . .	24	48	Botswana . . .	72	29
Khmer Republic . . .	4,629	1,676	Gambia . . .	74	15
Korea . . .	2,280	241	Ghana . . .	406	126
Laos . . .	6,552	1,119	Kenya . . .	507	103
Malaysia . . .	23,717	2,621	Lesotho . . .	84	27
Maldives Islands . . .	80	44	Malawi . . .	141	87
Nepal . . .	978	840	Mauritius . . .	76	28
Pakistan . . .	45,078	2,757	Nigeria . . .	935	115
Philippines . . .	5,919	122	Rhodesia . . .	67	1
Singapore . . .	5,099	588	Sierra Leone . . .	155	45
Thailand . . .	24,286	3,736	Sudan . . .	44	13
Vietnam . . .	18,480	2,916	Swaziland . . .	54	12
Miscellaneous, i.e. administrative costs, regional projects, etc.	6,200	919	Tanzania . . .	450	56
<i>Total . . .</i>	<i>299,855</i>	<i>40,542</i>	Uganda . . .	186	102
<b>SOUTH PACIFIC—</b>			Zambia . . .	295	154
British Solomon Islands Protectorate . . .	128	72	Miscellaneous . . .	134	30
Fiji . . .	2,205	904	<i>Total . . .</i>	<i>3,680</i>	<i>943</i>
			<b>Grand Total . . .</b>	<b>307,022</b>	<b>42,826</b>

NOTE. The cumulative totals do not include expenditure made under the Commonwealth Co-operation in Education Scheme before 1968-69.

This bilateral aid is channelled through a number of programmes, the most important of which is the Colombo Plan—a loose co-ordinating framework of donors and recipients established in 1950. Through these programmes, Australia undertakes a variety of development projects, balance of payments support programmes, provision of equipment, provision of technical assistance experts, and training of students in Australia.

The following table sets out the numbers of students who have been trained in Australia under the aid programmes.

**STUDENTS TRAINED IN AUSTRALIA UNDER AID PROGRAMMES**  
(Number)

<i>Scheme</i>	<i>Cumulative total at 30 June 1971</i>	<i>Total in training at 30 June 1971</i>	<i>Number of new awards 1970-71</i>
Colombo Plan . . .	10,744	1,643(a)	1,084
SCAAP(b) . . .	767	72	100
SPAP(b) . . .	269	56	79
SEATO (civilian training)	82	10	15
AIAS(b) . . .	124	13	9
<b>Total . . .</b>	<b>11,986</b>	<b>1,794</b>	<b>1,287</b>

(a) Figure includes 39 students who came to Australia under Special Aid to the Khmer Republic. (b) The Special Commonwealth African Assistance Plan (SCAAP) was established to provide training awards to Commonwealth countries in Africa. The South Pacific Aid Programme (SPAP) provides the same sort of assistance to the islands and territories of the Pacific. A small training programme known as the Australian International Awards Scheme (AIAS) is intended to meet occasional requests from countries outside these regions, particularly those from the Commonwealth countries of the Caribbean and Mediterranean regions.

## Membership of the Organisation for Economic Co-operation and Development (OECD)

Australia joined the Organisation for Economic Co-operation and Development (OECD) as a full member on 7 June 1971.

The Organisation's membership consists of the following 23 countries: Australia; Austria; Belgium; Canada; Denmark; Finland; France; Germany; Greece; Iceland; Ireland; Italy; Japan; Luxemburg; Netherlands; Norway; Portugal; Spain; Sweden; Switzerland; Turkey; The United Kingdom; The United States of America; and the two special status countries of New Zealand and Yugoslavia.

The OECD was established in 1961 to succeed the former Organisation for European Economic Co-operation (OEEC) which had its origins in the administration of Marshall Plan aid in Europe after the Second World War. The need for a new Organisation was apparent by the beginning of the 1960's, when changing economic conditions called for new arrangements for international economic co-operation. The functions of the OEEC were revised and membership was extended with the inclusion of the United States of America and Canada, and later Finland and Japan in the new Organisation.

The broad aims of the Organisation are to achieve high, sustainable economic growth and employment as well as financial stability in member countries, and to contribute to the expansion of world trade on a multi-lateral, non-discriminatory basis.

OECD member countries, which as a group comprise the major industrialised countries of the world, now participate in a well-established pattern of consultation, co-operation and co-ordination on a wide range of economic matters, including mutual balance of payments problems.

Since joining the OECD, Australia has participated in many important meetings, including the Ministerial Council Meeting in June 1971 when Australia was invited to join the Organisation, the Economic Policy Committee, and the Ministers of Science Meeting in October, 1971.

The Secretary-General of the OECD, visited Australia in March 1972 and held wide-ranging discussions with the Australian Government and leaders in primary and secondary industry.

### OECD functions

The following is a brief description of some of the more important OECD functions.

The *Economic Policy Committee* has developed as an important means of maintaining and improving the co-ordination of member countries' economic policies. The Committee's work has become increasingly involved in identification of the major problems which accompany growth in industrialised countries, and the policy implications of these problems.

The *Directorate of Financial Affairs* comprises ten separate committees covering invisible transactions, payments, financial markets, financial statistics, fiscal affairs, insurance, tourism, restrictive business practices, maritime transport and consumer policies.

The *Economic and Development Review Committee* is responsible for the annual economic survey of individual member countries. Each country's economic situation and policies are examined by a panel of representatives of other member governments and the results are published in an annual survey.

The *Development Assistance Committee (DAC)* attempts to expand the aggregate volume of resources made available to the less developed countries and to improve their effectiveness. All the major developed countries of the OECD are members of the DAC, which Australia joined separately in 1966. Member countries of the DAC comprise the largest donors of financial and technical aid, representing some 95 per cent of the global total of aid from both official and private sources.

The *Environment Committee* investigates problems associated with water, air, pesticides, noise and urban development. Certain urgent issues are being studied by ad hoc groups.

The OECD emphasises the economic and trade implications of environmental policies, relating such policies to qualitative objectives of growth policies, and formulating concerted solutions to problems.

The *Trade Committee* and its subsidiary bodies consider questions which relate to trade policies and practices or consult with each other on particular trade issues. The Committee is also used as a forum for the co-ordination of trade policy issues which arise in relations with non-member countries.

The *Committee for Scientific and Technological Policy* assumed the functions of the former Committee for Science Policy and had its mandate extended in January 1972, to include the responsibility for ensuring co-operation among member countries in the field of technology as well as science. The Committee examines national policies and links between science, economic growth and social development. Ministerial meetings on science and technology are held every two years for which the Committee makes the necessary preparations.

The *Manpower and Social Affairs Committee* studies and compares member countries' progress with manpower and industrial relations, and studies aspects of social planning.

*Tariff preferences.* The Organisation has also played a central role in the introduction of a system of generalised non-reciprocal and non-discriminating tariff preferences for the benefit of developing countries.

*Problems of world trade.* The meeting of the Ministerial Council of the OECD in June 1971 authorised the establishment of a small, high level group to study problems of world trade and related matters arising in the longer term perspective. Australia has made submissions to this group.

*Other committees* of the OECD are established, for example in the fields of Agriculture, Fisheries, Education, Road research and Energy.

### Diplomatic representation

The Department of Foreign Affairs is responsible for advising the Minister for Foreign Affairs and the Australian Government on the conduct of foreign affairs and relations with foreign Governments. Its officers staff the Australian diplomatic service and the consular and administrative service.

In December 1971 Australia maintained the following diplomatic and consular missions overseas and full details of these missions are available from the Department of Foreign Affairs, Canberra, A.C.T.

NOTE. In certain cases the Head of Mission accredited to one country is also accredited to another country. Where this is the case the name of the country in which the Head of Mission is located is shown in brackets. Except where indicated the missions are located in capital cities.

### AUSTRALIAN MISSIONS OVERSEAS

#### Embassies (46)

Afghanistan ( <i>in</i> Pakistan)	Iran	The Philippines
Arab Republic of Egypt	Ireland	Portugal
Argentina	Israel	Romania ( <i>in</i> Yugoslavia)
Austria	Italy	South Africa, Republic of
Belgium	Japan	(Pretoria)
Brazil	Khmer Republic	Spain
Burma	Korea	Sweden
Chile	Laos	Switzerland
China, Republic of (Taiwan)	Lebanon	Thailand
Denmark ( <i>in</i> The Netherlands)	Luxembourg ( <i>in</i> Belgium)	Turkey, Republic of
Ethiopia ( <i>in</i> Kenya)	Mexico	Union of Soviet Socialist
Finland ( <i>in</i> Sweden)	Nepal ( <i>in</i> India)	Republics
France	The Netherlands	United States of America
Germany, Federal Republic of	Norway ( <i>in</i> Sweden)	Uruguay ( <i>in</i> Argentina)
Greece	Pakistan	Vietnam
Indonesia	Peru	Yugoslavia

#### High Commissions (17)

Britain*	Kenya	Singapore
Canada	Malaysia	Tanzania
Ceylon	Malta	Tonga ( <i>in</i> Fiji)
Fiji	Mauritius ( <i>in</i> Tanzania)	Uganda ( <i>in</i> Kenya)
Ghana	New Zealand	Western Samoa ( <i>in</i> Fiji)
India	Nigeria	

#### Other (18)

*Military Mission in Berlin*† (*in* Germany, Federal Republic of).

*Mission to*—European Atomic Energy Community (Euratom) (Brussels); European Coal and Steel Community (Brussels); European Economic Community (Brussels); United Nations (New York); United Nations (Geneva); Organization for Economic Co-operation and Development (Paris); Bangladesh.

*Consulate-General in*—Los Angeles; New York; San Francisco; Milan; Chicago; Berlin.

\* Administered by Prime Minister's Department.  
the Australian Military Mission in Berlin.

† The Australian Ambassador to Germany is also head of



*Consulate in*—Graz, Austria; Geneva, Switzerland; Hamburg, Germany, Federal Republic of; Noumea, New Caledonia; Capetown, South Africa.

*Representative in*—Nauru.

The Department of Foreign Affairs is responsible for the control and administration of all the diplomatic and consular missions listed above with the exception of the High Commission, London, which is the responsibility of the Department of the Prime Minister and Cabinet.

Specialist officers of the Department of Trade, other Commonwealth Government Departments and the Defence Services stationed abroad are attached to Australian diplomatic or consular missions. Senior attached officers are in some cases accredited to the missions with diplomatic or consular ranks approved by the Minister for Foreign Affairs. In addition, the Department of Trade and Industry maintains Trade Commissioner posts which engage in trade promotion in a number of cities where Australia does not have diplomatic or consular representation (*see below*).

The Department of Immigration similarly maintains offices overseas which engage in recruitment of migrants (*see page 121*).

### Agents-General for States

From early times the Australian colonies maintained agents in London to encourage immigration and to carry out commercial and financial negotiations. Since federation the States have continued to maintain Agents-General in London, all of whom work in close co-operation with the High Commissioner for Australia at Australia House, London.

### Diplomatic representatives in Australia

There are forty-three non-Commonwealth and ten Commonwealth countries represented by diplomatic missions in Australia.

The following list shows the diplomatic missions in Australia. Full details of Commonwealth and foreign representation in Australia are available from the Department of Foreign Affairs, Canberra. Consular representatives are not included and particulars of these are available from the Department of Foreign Affairs, Canberra. There are about 300 such representatives in Australia, and sixty countries are represented.

## DIPLOMATIC REPRESENTATIVES IN AUSTRALIA

### Embassies (43)

Arab Republic of Egypt	Ireland	Portugal
Argentina	Israel	Romania ( <i>in Japan</i> )
Austria	Italy	South Africa, Republic of
Belgium	Japan	Spain
Brazil	Khmer Republic	Sweden
Burma	Korea	Switzerland
Chile	Laos	Thailand
China, Republic of (Taiwan)	Lebanon	Turkey, Republic of
Denmark	Mexico	Union of Soviet Socialist Republics
Finland	Nepal ( <i>in Japan</i> )	United States of America
France	The Netherlands	Uruguay
Germany, Federal Republic of	Norway	Vietnam
Greece	Pakistan	Yugoslavia, Socialist Federal Republic of
Indonesia	Peru	
Iran ( <i>in Indonesia</i> )	The Philippines	

### High Commissioners (10)

Britain	Ghana	New Zealand
Canada	India	Singapore
Ceylon	Malaysia	
Fiji	Malta	

## Overseas trade representation

### The Australian Trade Commissioners Service, 1 January 1972

The Department of Trade and Industry maintains Trade Commissioners at forty-nine posts in thirty-six countries. Twenty-five editions of the Department of Trade and Industry's promotion periodical *Austral News* now circulate in more than 100 countries in seven languages. (*See also* Australian Trade Missions in the chapter Overseas Transactions.)

The countries where Australian Trade Commissioner posts are located are shown in the following list. Except where indicated the missions are located in capital cities.

Argentina	India	The Philippines
Austria	Indonesia	Singapore
Bahrain	Iran	South Africa, Republic of (Johannesburg, Cape Town)
Belgium	Italy (Rome, Milan)	Sweden
Britain	Japan (Tokyo, Osaka)	Switzerland
Canada (Montreal, Vancouver, Ottawa, Toronto)	Kenya	Thailand
Chile	Lebanon	Trinidad
China, Republic of (Taiwan)	Malaysia	Arab Republic of Egypt
Fiji	Malta	United States of America (Washington, D.C., Chicago, New York, San Francisco, Los Angeles)
France	Mexico	
Germany, Federal Republic of (Bonn, Hamburg)	The Netherlands	
Greece	New Zealand (Wellington, Auckland, Christchurch)	
Hong Kong	Pakistan	
	Peru	

Full details of the Australian Trade Commissioner posts are available from the Department of Trade and Industry, Canberra, A.C.T.

#### Australian Trade Correspondents and Marketing Officers

Australian Trade Correspondents and Marketing Officers have no official status but supplement the work of the Trade Commissioner in whose Territory they are located. Correspondents are located in Addis Ababa, Ethiopia; Istanbul, Turkey; Mozambique; Port Louis, Mauritius; and Tel Aviv, Israel. Marketing Officers are located in Bombay and Calcutta, India; Brussels, Belgium; Colombo, Ceylon; Dublin, Ireland; Madrid, Spain; Rangoon, Burma; Rio de Janeiro, Brazil; and Seoul, Korea.

#### Trade Commissioners of overseas governments in Australia

The Trade Representatives of overseas governments in Australia are shown in the following list. Full details of Trade Representatives in Australia are available from the Department of Foreign Affairs, Canberra, A.C.T.

Britain (Canberra, Sydney, Melbourne, Brisbane, Adelaide, Perth)	Norway (Canberra)
Canada (Sydney, Melbourne)	Pakistan (Sydney)
Ceylon (Sydney)	Peru (Canberra)
China, (Republic of Taiwan) (Sydney)	Philippines (Melbourne)
France (Sydney)	Singapore (Sydney)
Italy (Sydney)	South Africa (Melbourne)
Indonesia (Canberra)	Spain (Canberra)
Japan (Canberra)	Sweden (Melbourne)
Malaysia (Sydney)	U.S.A. (Canberra)
New Zealand (Sydney, Melbourne, Canberra, Brisbane, Perth)	U.S.S.R. (Canberra)

#### Commonwealth Migration Offices overseas

The Department of Immigration has established offices overseas to handle migration matters, and in some countries regional officers are provided. Inquiries and applications may also be made at any Australian diplomatic, consular or trade post overseas. Full details are available from the Department of Immigration, Canberra, A.C.T.





## CHAPTER 7

### POPULATION

This chapter includes statistics of the distribution, growth and structure of the population and statistics of the numbers and characteristics of overseas arrivals and departures. More detailed figures will be found in the bulletin *Demography* (4.9), and current statistics are published in the *Monthly Review of Business Statistics* (1.4), the *Quarterly Summary of Australian Statistics* (1.3), and the mimeographed series *Summary of Vital and Population Statistics* (4.11) and *Overseas Arrivals and Departures* (4.3). The final detailed results of each population census are published in a series of printed volumes and parts (see list for 1966 census at end of this Year Book, also the chapter Miscellaneous—Statistical and other official publications of Australia). Some detailed preliminary results of the 1971 Census of Population and Housing are shown in the Appendix to this Year Book.

With the proclamation of the *Constitution Alteration (Aboriginals)* 1967 on 10 August 1967 the provision in Section 127 of the Constitution requiring the exclusion of Aborigines in reckoning the numbers of the people of the Commonwealth or of a State or other part of the Commonwealth, was repealed. Accordingly, population statistics for all dates subsequent to 10 August 1967 no longer exclude full-blood Aborigines. Estimates for earlier periods back to 30 June 1961 have also been revised to include these Aborigines. However, detailed analyses of the population enumerated in the censuses of June 1961 and 1966 exclude full-blood Aborigines. Particulars of the Aboriginal population are given on pages 140–1 in this chapter.

#### Types of population statistics

Statistics of the population and its characteristics for Australia or the component States and Territories or other constituent areas at specific dates are divided in four main ways.

- (i) *Those ascertained by census enumeration.* The population censuses result in comprehensive statistics of characteristics of the population, such as age, sex and birthplace.
- (ii) *Those ascertained by 'population counts'.* From time to time in specific areas there are additional enumerations of the population, which are known as population counts, because normally very little information other than the number of persons and their sex is obtained.
- (iii) *Current estimates of number, sex and age.* Estimates are prepared for dates subsequent to a census, taking account of natural increase and net migration since the last census.
- (iv) *Projections of the population.* Projections of the population and its age/sex structure are prepared from time to time, based on current estimates of population by age and sex and on assumptions about future trends in mortality, fertility and net migration.

#### The census

In Year Book No. 53 a special article was included outlining the history, purposes, legal basis, organisation, and publication of results of population censuses in Australia (see pages 164–70 of that issue).

##### Early 'musters'

Although regular censuses were not instituted in the several colonies until the years specified in the table below, population returns in one form or another have existed from a very early period in the history of Australia. The earliest enumerations were known as 'musters', and although the actual results of very few of them have been preserved, it is probable that during the early days of colonisation they were of frequent occurrence. The first official 'muster' was taken in 1788 soon after the new settlement at Sydney Cove was formed, and in 1803 the first 'muster' of convicts in Van Diemen's Land (now Tasmania) was conducted.

##### Development of the census

The first regular census in Australia was taken in New South Wales in November 1828, and included the population of Moreton Bay (now Queensland) but not Van Diemen's Land (Tasmania). Particulars were asked concerning the names, ages and civil conditions of the inhabitants. The next

census was taken in 1833, and was followed by another in 1836, when arrangements were made for the enumeration of the population of the newly-established settlement at Port Phillip, (Victoria). The first censuses taken in Tasmania, Victoria and Queensland as separate colonies were in 1841, 1854 and 1861 respectively. The first regular census in South Australia was taken in 1844 and in Western Australia in 1848. The 1881 census was the first simultaneous census taken in Australia and formed part of the first simultaneous census of the British Empire.

The following table shows the total population recorded at each census conducted prior to 1891.

POPULATION(a), CENSUSES IN AUSTRALIA, 1828 TO 1886

Date	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1828- November	36,598	..	..	..	..	..	..	..	..
1833- 2 September	60,794	..	..	..	..	..	..	..	..
1836- 2 September	77,096	..	..	..	..	..	..	..	..
1841- 2 March	130,856	..	..	..	..	..	..	..	..
31 December	..	..	..	..	..	51,450	..	..	..
1844-26 February	..	..	..	17,366	..	..	..	..	..
1846-26 February	..	..	..	22,390	..	..	..	..	..
2 March	189,609	..	..	..	..	..	..	..	..
1847-31 December	..	..	..	..	..	67,313	..	..	..
1848-10 October	..	..	..	..	4,622	..	..	..	..
1851-1 January	..	..	..	63,700	..	..	..	..	..
1 March	268,344	..	..	..	..	70,130	..	..	..
1854-26 April	..	(b)234,298	..	..	..	..	..	..	..
30 September	..	..	..	..	11,743	..	..	..	..
1855-31 March	..	..	..	85,821	..	..	..	..	..
1856- 1 March	269,722	..	..	..	..	..	..	..	..
1857-29 March	..	408,998	..	..	..	..	..	..	..
31 March	..	..	..	..	..	81,492	..	..	..
1859-31 December	..	..	..	..	14,837	..	..	..	..
1861- 7 April	350,860	538,628	(b)30,059	126,830	..	89,977	..	..	..
1864- 1 January	..	..	61,467	..	..	..	..	..	..
1866-26 March	..	..	..	163,452	..	..	..	..	..
1868- 2 March	..	..	99,901	..	..	..	..	..	..
1870- 7 February	..	..	..	..	..	99,328	..	..	..
31 March	..	..	..	..	24,785	..	..	..	..
1871- 2 April	502,998	730,198	..	185,626	..	..	..	..	..
1 September	..	..	120,104	..	..	..	..	..	..
1876-26 March	..	..	..	213,271	..	..	..	..	..
1 May	..	..	..	173,283	..	..	..	..	..
1881- 3 April	749,825	861,566	213,525	276,414	29,708	115,705	(c)3,451	..	2,250,194
1886- 1 May	..	..	322,853	..	..	..	..	..	..

(a) Excludes full-blood Aborigines. (b) Previously included with New South Wales. (c) Included with South Australia for the censuses of 1866, 1871 and 1876. Actually Northern Territory was not transferred to the Commonwealth until 1 January 1911.

#### Australia-wide censuses

State and Territory populations recorded at the Australia-wide censuses taken over the period 1881 to 1971 are shown in the following table. The figures relate to the political boundaries of the several States (or Colonies) and Territories as they existed at the date of each census, except that the Northern Territory has been shown separately from South Australia for the censuses prior to its transfer from that State. The years of formation of the separate Colonies and transfer of the Territories are shown in the chapter Discovery, Colonisation and Federation of Australia (page 5).

At censuses up to 1966, in conformity with Section 127 of the Constitution, Aborigines were excluded from the published population. In 1967 the Constitution was altered to remove this provision, and the 1971 Census therefore includes Aborigines. In order to provide comparability between the two censuses, the 1966 population in the following tables has been amended to include Aborigines and therefore differs from the 1966 population previously published.

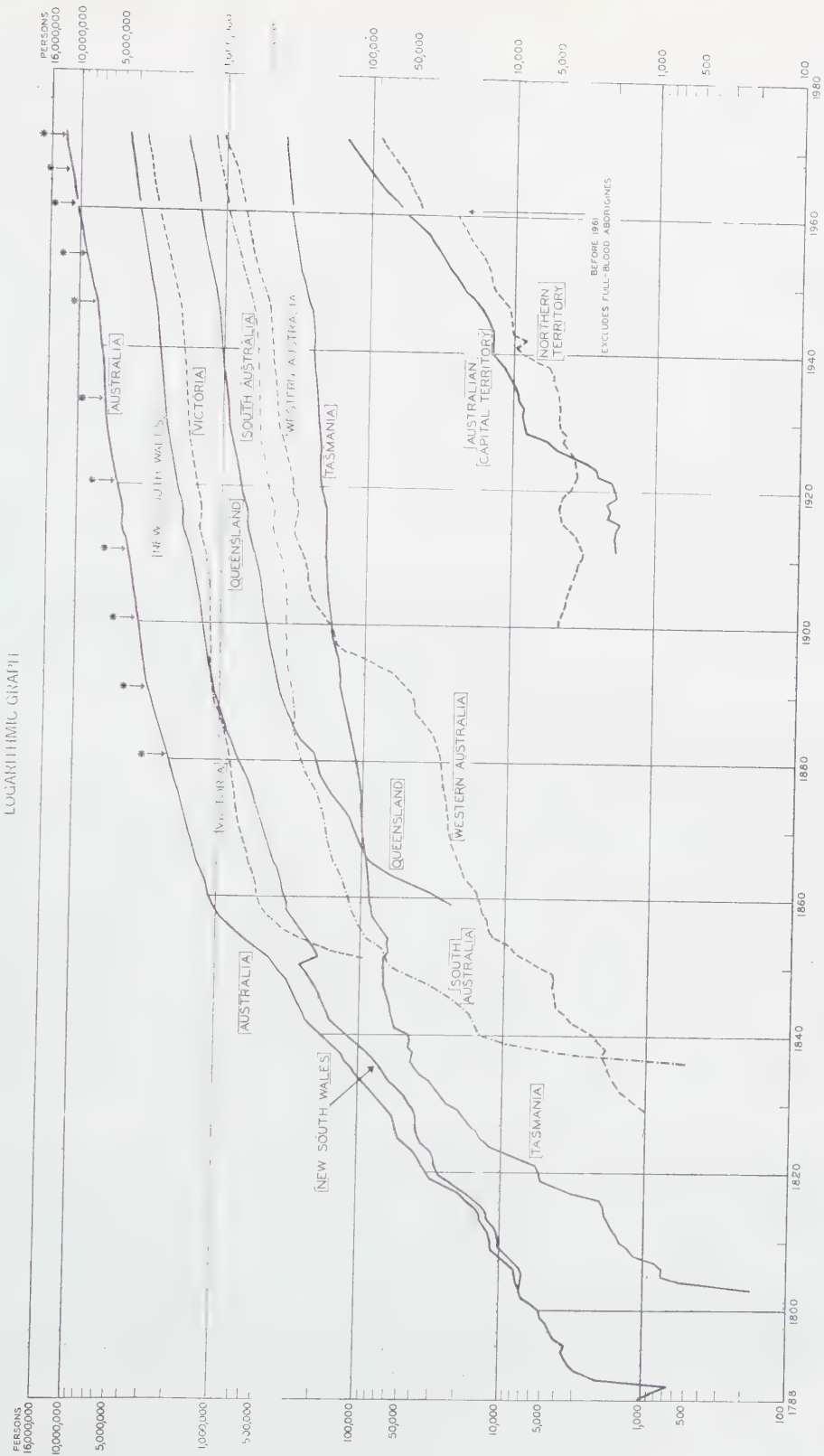
POPULATION, BY SEX: AUSTRALIAN CENSUSES, STATES AND TERRITORIES  
1881 TO 1971

Census	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.(a)	Aust.
MALES									
3 April 1881	410,211	451,623	125,325	146,183	17,062	61,162	3,347	..	1,214,913
5 April 1891	609,666	598,222	223,779	162,241	29,807	77,560	4,560	..	1,705,835
31 March 1901	710,005	603,720	277,003	180,485	112,875	89,624	4,216	..	1,977,928
3 April 1911	857,698	655,591	329,506	207,358	161,565	97,591	2,734	992	2,313,035
4 April 1921	1,071,501	754,724	398,969	248,267	177,278	107,743	2,821	1,567	2,762,870
30 June 1933	1,318,471	903,244	497,217	290,962	233,937	115,097	3,378	4,805	3,367,111
30 June 1947	1,492,211	1,013,867	567,471	320,031	258,076	129,244	7,378	9,092	3,797,370
30 June 1954	1,720,860	1,231,099	676,252	403,903	330,358	157,129	10,288	16,229	4,546,118
30 June 1961	1,972,909	1,474,395	774,579	490,225	375,452	177,628	16,206	30,858	5,312,252
30 June 1966(b)	2,126,652	1,614,240	849,390	550,196	432,569	187,391	31,159	49,991	5,841,588
30 June 1971(b)p	2,302,110	1,748,916	919,992	585,827	527,217	196,284	48,159	73,513	6,402,018

For footnotes see end of table.

# POPULATION OF AUSTRALIA, 1788 TO 1971

LOGARITHMIC GRAPH



NOTE: THE VERTICAL SCALE IS LOGARITHMIC, AND THE CURVES RISE AND FALL ACCORDING TO THE RATE OF INCREASE OR DECREASE. ACTUAL NUMBERS ARE INDICATED BY THE SCALE.

PLATE 17



POPULATION, BY SEX: AUSTRALIAN CENSUSES, STATES AND TERRITORIES  
1881 TO 1971—*continued*

<i>Census</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.(a)</i>	<i>Aust.</i>
FEMALES									
3 April 1881 .	339,614	409,943	88,200	130,231	12,646	54,543	104	..	1,035,281
5 April 1891 .	517,471	541,866	169,939	153,292	19,975	69,107	338	..	1,471,988
31 March 1901 .	644,841	597,350	221,126	177,861	71,249	82,851	595	..	1,795,873
3 April 1911 .	789,036	659,960	276,307	201,200	120,549	93,620	576	722	2,141,970
4 April 1921 .	1,028,870	776,556	357,003	246,893	155,454	106,037	1,046	1,005	2,672,864
30 June 1933 .	1,282,376	917,017	450,317	289,987	204,915	112,502	1,472	4,142	3,262,728
30 June 1947 .	1,492,627	1,040,834	538,944	326,042	244,404	127,834	3,490	7,813	3,781,988
30 June 1954 .	1,702,669	1,221,242	642,007	393,191	309,413	151,623	6,181	14,086	4,440,412
30 June 1961 .	1,944,104	1,455,718	744,249	479,115	361,177	172,712	10,889	27,970	5,195,934
30 June 1966(b) .	2,111,249	1,605,977	824,934	544,788	415,531	184,045	25,345	46,041	5,757,910
30 June 1971(b)p .	2,287,446	1,747,245	903,370	586,947	500,155	193,590	37,360	70,330	6,326,443

PERSONS									
3 April 1881 .	749,825	861,566	213,525	276,414	29,708	115,705	3,451	..	2,250,194
5 April 1891 .	1,127,137	1,140,088	393,718	315,533	49,782	146,667	4,898	..	3,177,823
31 March 1901 .	1,354,846	1,201,070	498,129	358,346	184,124	172,475	4,811	..	3,773,801
3 April 1911 .	1,646,734	1,315,551	605,813	408,558	282,114	191,211	3,310	1,714	4,455,005
4 April 1921 .	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734
30 June 1933 .	2,600,847	1,820,261	947,534	580,949	438,852	227,599	4,850	8,947	6,629,839
30 June 1947 .	2,984,838	2,054,701	1,106,415	646,073	502,480	257,078	10,868	16,905	7,579,358
30 June 1954 .	3,423,529	2,452,341	1,318,259	797,094	639,771	308,752	16,469	30,315	8,986,530
30 June 1961 .	3,917,013	2,930,113	1,518,828	969,340	736,629	350,340	27,095	58,828	10,508,186
30 June 1966(b) .	4,237,901	3,220,217	1,674,324	1,094,984	848,100	371,436	56,504	96,032	11,599,498
30 June 1971(b)p .	4,589,556	3,496,161	1,823,362	1,172,774	1,027,372	389,874	85,519	143,843	12,728,461

(a) Part of New South Wales before 1911. (b) Includes Aborigines

Increase since 1901 census

POPULATION: INTERCENSAL INCREASES, STATES AND TERRITORIES  
1901 TO 1971

<i>State or Territory</i>	<i>1901-1911 (10 years)</i>	<i>1911-1921 (10 years)</i>	<i>1921-1933 (12½ years)</i>	<i>1933-1947 (14 years)</i>	<i>1947-1954 (7 years)</i>	<i>1954-1961 (7 years)</i>	<i>1961-1966(a) (5 years)</i>	<i>1966-1971(a) (5 years)</i>
NUMERICAL INCREASE								
N.S.W.(b)	293,602	453,637	500,476	383,991	438,691	493,484	320,888	351,655
Vic. .	114,481	215,729	288,981	234,440	397,640	477,772	290,104	275,944
Qld .	107,684	150,159	191,562	158,881	211,844	200,569	155,496	149,038
S.A. .	50,212	86,602	85,789	65,124	151,021	172,246	125,644	77,790
W.A. .	97,990	50,618	106,120	63,628	137,291	96,858	111,471	179,272
Tas. .	18,736	22,569	13,819	29,479	51,674	41,588	21,096	18,438
N.T. .	-1,501	557	983	6,018	5,601	10,626	29,409	29,015
A.C.T.(c)	..	858	6,375	7,958	13,410	28,513	37,204	47,811
Australia	681,204	980,729	1,194,105	949,519	1,407,172	1,521,656	1,091,312	1,128,963

AVERAGE ANNUAL RATE OF INCREASE—PER CENT

N.S.W.(b)	1.97	2.46	1.76	0.99	1.98	1.94	1.51	1.61
Vic. .	0.91	1.53	1.42	0.87	2.56	2.58	1.80	1.66
Qld .	1.98	2.24	1.86	1.11	2.53	2.04	1.86	1.72
S.A. .	1.32	1.94	1.31	0.76	3.05	2.83	2.29	1.38
W.A. .	4.36	1.66	2.29	0.97	3.51	2.03	2.63	3.91
Tas. .	1.04	1.12	0.51	0.87	2.65	1.82	1.14	0.97
N.T. .	-3.67	1.57	1.87	5.93	6.12	7.37	10.41	8.64
A.C.T.(c)	..	4.14	10.71	4.65	8.70	9.93	7.75	8.42
Australia	1.67	2.01	1.63	0.96	2.46	2.26	1.88	1.87

(a) Includes Aborigines, before 1911. (b) Includes Australian Capital Territory before 1911. (c) Part of New South Wales

Minus sign (—) denotes decrease.

### Population estimates

The estimated population for Australia as a whole takes account of natural increase and net overseas migration since the latest census. The population in each State and Territory is estimated by adding to the population ascertained at the census the recorded natural increase and the net gain from overseas migration for that State or Territory; gains and corresponding losses that result from movements between States and Territories are also taken into account in so far as they are recorded as transfers of residence under child endowment procedures or Commonwealth electoral procedures or are indicated by the results of any special count. As records of migration by State or Territory are not complete, the estimated State and Territory populations so derived are approximate.

Estimates carried forward in this way eventually reach the point when another census is taken, and the numbers so ascertained supercede those resulting from the estimates. In the light of the census results the estimates for the newly completed intercensal period are revised to adjust for the differences between the new census result and the population at the census date estimated on the basis of the previous census. This is to bring intercensal estimates into line with the two census results and thus effect adjustment for unrecorded or inaccurately recorded movement of population in the intercensal period. Such a revision is made when the preliminary (field count) results of a census become available. Further revision may be necessary when the final results of a census become available. The preliminary results of the Census of Population and Housing of 30 June 1971 have been taken into account in the population estimates for dates subsequent to the Census of 30 June 1966.

Final revised estimates become the permanent population estimates. A mean population for twelve month periods is calculated by the method described on page 131. As populations at specific dates are used in these calculations, consequential revisions are made to mean populations when estimates for specific dates are revised as described above.

The method used for estimating State and Territory populations, as described above, is different from that used prior to June 1961 (for particulars see Year Book No. 52, page 191). Population estimates subsequent to the 1961 Census are based on a method which excludes holiday, business or other similar short-term movements between States and Territories since the census. As a consequence, marked quarterly seasonal movements in some States due to interstate holiday movements are reflected in population figures prior to 1961 but not for subsequent years. This has some effect on the continuity of the series of mean population figures and should be borne in mind when making calculations which use mean populations as a basis (see page 131). Since June 1961 such movements affect the estimates only in so far as people who were on holiday or other short-term travel interstate at the time of the Census are counted in the population of the State or Territory where they spent Census night. However, there are seasonal features in the movement of the populations of States and Territories due to movements of visitors from overseas and of Australians travelling overseas for holiday, business or other similar short-term periods.

### Growth of population

#### ESTIMATED POPULATION(a): STATES AND TERRITORIES DECEMBER, 1945 TO 1971

31 Dec.	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
MALES									
1945 .	1,464,686	994,784	556,829	312,588	251,590	125,854	7,252	8,283	3,721,866
1950 .	1,627,618	1,114,497	620,329	364,705	294,758	147,103	9,414	13,021	4,191,445
1955 .	1,774,382	1,281,891	696,544	423,042	343,838	165,356	11,149	17,615	4,713,817
1960 .	1,951,907	1,453,815	766,448	483,802	372,665	180,511	14,785	29,140	5,253,073
1965 .	2,112,610	1,602,058	841,926	544,257	427,330	186,483	30,632	48,333	5,793,629
1967 .	2,169,523	1,653,015	868,045	559,188	457,882	190,322	35,721	55,377	5,989,073
1968 .	2,204,326	1,678,633	882,747	566,577	479,012	192,792	39,032	59,719	6,102,838
1969 .	2,247,902	1,709,777	897,684	574,533	499,083	194,677	42,252	64,943	6,230,851
1970 .	2,287,937	1,738,882	913,125	584,155	518,509	196,221	46,140	70,284	6,355,253
1971 .	2,325,817	1,764,714	932,278	591,455	535,909	197,396	48,986	77,148	6,473,703

(a) See footnote at end of table.

**ESTIMATED POPULATION(a): STATES AND TERRITORIES  
DECEMBER, 1945 TO 1971—continued**

<i>31 Dec.</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>FEMALES</b>									
1945 .	1,468,312	1,020,323	528,035	318,294	238,498	124,426	3,294	7,149	3,708,331
1950 .	1,613,439	1,122,685	585,089	358,138	277,891	143,230	5,006	10,558	4,116,036
1955 .	1,752,152	1,264,441	662,314	411,619	324,771	159,563	6,803	16,345	4,598,008
1960 .	1,925,354	1,434,475	735,838	473,220	358,368	175,458	10,002	26,132	5,138,847
1965 .	2,098,439	1,593,802	817,497	538,701	410,918	183,125	24,832	44,465	5,711,779
1967 .	2,156,861	1,648,721	846,642	556,456	438,174	187,358	28,417	52,400	5,915,029
1968 .	2,191,003	1,675,078	863,117	565,088	457,236	189,994	30,755	56,885	6,029,156
1969 .	2,234,660	1,707,049	879,407	574,185	475,366	191,943	32,969	61,762	6,157,341
1970 .	2,275,315	1,737,571	896,324	585,234	492,754	193,547	35,898	67,113	6,283,756
1971 .	2,314,996	1,766,021	916,333	593,116	509,846	195,119	38,456	73,474	6,407,361
<b>PERSONS</b>									
1945 .	2,932,998	2,015,107	1,084,864	630,882	490,088	250,280	10,546	15,432	7,430,197
1950 .	3,241,057	2,237,182	1,205,418	722,843	572,649	290,333	14,420	23,579	8,307,481
1955 .	3,526,534	2,546,332	1,358,858	834,661	668,609	324,919	17,952	33,960	9,311,825
1960 .	3,877,261	2,888,290	1,502,286	957,022	731,033	355,969	24,787	55,272	10,391,920
1965 .	4,211,049	3,195,860	1,659,423	1,082,958	838,248	369,608	55,464	92,798	11,505,408
1967 .	4,326,384	3,301,736	1,714,687	1,115,644	896,056	377,680	64,138	107,777	11,904,102
1968 .	4,395,329	3,353,711	1,745,864	1,131,665	936,248	382,786	69,787	116,604	12,131,994
1969 .	4,482,562	3,416,826	1,777,091	1,148,718	974,449	386,620	75,221	126,705	12,388,192
1970 .	4,563,252	3,476,453	1,809,449	1,169,389	1,011,263	389,768	82,038	137,397	12,639,009
1971 .	4,640,813	3,530,735	1,848,611	1,184,571	1,045,755	392,515	87,442	150,622	12,881,064

(a) Excludes full-blood Aborigines before 1961. The preliminary results of the Census of 30 June 1971 have been taken into account in the preparation of estimates for dates after the Census of 30 June 1966. See text page 127.

The estimated population at 31 December each year from 1788 to 1946 is shown in *Demography*, Bulletin No. 67, 1949, and for the period 1901 to 1970 in *Demography*, Bulletin No. 86 (see also Statistical Summary in this Year Book). A graph illustrating the growth of the population of Australia and of each State and Territory appears on plate 17, page 125.

**Proportions of area and of population, density and masculinity**

**PROPORTIONS OF AREA AND OF POPULATION: DENSITY AND MASCULINITY  
OF POPULATION: STATES AND TERRITORIES, 31 DECEMBER 1971**

<i>State or Territory</i>	<i>Proportion of total area per cent</i>	<i>Proportion of population, 31 December 1971 (per cent)</i>			<i>Density(a)</i>	<i>Masculinity(b)</i>
		<i>Males</i>	<i>Females</i>	<i>Persons</i>		
New South Wales . . . .	10.43	35.93	36.13	36.03	15.00	100.47
Victoria . . . . .	2.96	27.26	27.56	27.41	40.17	99.93
Queensland . . . . .	22.47	14.40	14.30	14.35	2.77	101.74
South Australia . . . . .	12.81	9.14	9.26	9.20	3.12	99.72
Western Australia . . . . .	32.88	8.28	7.96	8.12	1.07	105.11
Tasmania . . . . .	0.89	3.05	3.05	3.05	14.88	101.17
Northern Territory . . . . .	17.53	0.76	0.60	0.68	0.17	127.38
Australian Capital Territory . . . . .	0.03	1.19	1.15	1.17	160.41	105.00
<b>Australia . . . . .</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>4.34</b>	<b>101.04</b>

(a) Number of persons per square mile. (b) Number of males per 100 females.

NOTE, Additional information about density and masculinity appears later in this chapter.



### Elements of increase

The 'total increase' of the population is obtained by combining 'natural increase', i.e. the excess of births over deaths, with 'net migration', i.e. the excess of arrivals over departures. Comparison of the total increase so obtained with that derived by subtracting the population recorded at one census from that recorded at the next census reveals differences which are attributable partly to differences in the coverage of the census enumerations, and partly to deficiencies in the records of the elements of increase.

In the following table figures for increase in total population include, in addition to the recorded natural increase and net overseas migration gain, adjustments to make the series of increases agree with total intercensal increases revealed by successive censuses (up to the Census of 30 June 1971). The adjustment reflects the combined net error in the recording of births, deaths and migration during the five year period and in the census enumerations.

POPULATION: ELEMENTS OF INCREASE, AUSTRALIA, 1946 TO 1971

Period		Natural increase (a)	Net overseas migration gain(b)	Increase in total population(c)		
				Males	Females	Persons
1946-50	. .	529,447	353,084	469,579	407,705	877,284
1951-55	. .	599,702	413,824	522,372	481,972	1,004,344
1956-60	. .	679,857	405,022	539,256	540,839	1,080,095
1961-65	. .	690,294	399,888	519,623	553,784	1,073,407
1966-70	. .	665,310	543,808	561,624	571,977	1,133,601
1967	. . .	126,593	91,909	99,501	102,476	201,977
1968	. . .	131,359	113,053	113,765	114,127	227,892
1969	. . .	143,680	129,046	128,013	128,185	256,198
1970	. . .	144,468	122,874	124,402	126,415	250,817
1971	. . .	165,712	84,605	118,450	123,605	242,055

(a) Excess of births registered over deaths registered. From September 1939 to June 1947, deaths of defence personnel whether overseas or in Australia are included. Excludes full-blood Aborigines before 1961. (b) Excess of recorded overseas arrivals over recorded overseas departures. Excludes troop movements for the period September 1939 to June 1947. (c) Increase in total population as recorded at censuses or as estimated for intercensal periods. Excludes full-blood Aborigines before 1961.

### Rate of population growth

In the following two tables natural increase refers to the excess of births over deaths, net migration refers to excess of overseas arrivals over departures (excluding overseas movement of defence personnel for the period of September 1939 to June 1947) and total increase is the sum of natural increase and net migration together with adjustments to make the series of increases agree with total intercensal increases revealed by successive census results (up to the Census of 30 June 1971).

The average annual rate of total increase is derived from the formula:

$$P_t = P_0 \left(1 + \frac{r}{100}\right)^t$$

where  $P_0$  and  $P_t$  are the populations at the beginning and end respectively of a  $t$ -year period and  $r$  is the average annual percentage rate of growth.

The average annual rate of natural increase and net migration is computed by dividing the average annual rate of total increase between its components in proportion to the fraction of total increase due to each component during the period. Differences between the sum of the rates of natural increase and of net migration and the rate of total increase are due to the intercensal adjustment.

**POPULATION: ANNUAL RATE OF GROWTH, AUSTRALIA**  
**1946 TO 1971**  
 (Per cent)

<i>Period</i>	<i>Natural increase(a)(b)</i>	<i>Net migration</i>	<i>Total increase(b)</i>
<i>Average annual rate—</i>			
1946–50 . . .	1.36	0.91	2.26
1951–55 . . .	1.38	0.95	2.31
1956–60 . . .	1.40	0.83	2.22
1961–65 . . .	1.27	0.74	1.98
1966–70 . . .	1.12	0.91	1.90
<i>Annual rate—</i>			
1967 . . .	1.08	0.79	1.73
1968 . . .	1.10	0.95	1.91
1969 . . .	1.18	1.06	2.11
1970 . . .	1.17	0.99	2.02
1971 . . .	1.31	0.67	1.92

(a) From September 1939 to June 1947, deaths of defence personnel, whether overseas or in Australia, are included. (b) Excludes full-blood Aborigines before 1961.

The average annual rate of population growth during the present century has been 1.74 per cent, but the results from year to year have deviated widely from this figure. In the following table the period 1 January 1901 to 31 December 1971 has been arranged into certain defined groups of years according to the occurrence of influences markedly affecting the growth of population.

**POPULATION(a): PERIODIC RATES OF GROWTH, AUSTRALIA**  
**1901 TO 1971**

<i>Period</i>	<i>Interval (years)</i>	<i>Total increase ('000)</i>	<i>Average annual numerical increase ('000)</i>	<i>Average annual rate of population growth (per cent)</i>		
				<i>Natural increase</i>	<i>Net migration</i>	<i>Total</i>
1901 to 1913 . .	13	1,128	87	1.55	0.49	2.04
1914 to 1923 . .	10	862	86	1.49	0.15	1.64
1924 to 1929 . .	6	680	113	1.26	0.62	1.88
1930 to 1939 . .	10	569	57	0.82	0.02	0.85
1940 to 1946 . .	7	513	73	0.98	0.01	1.01
1947 to 1952 . .	6	1,222	204	1.37	1.19	2.54
1953 to 1961 . .	9	1,862	207	1.40	0.79	2.17
1962 to 1971 . .	10	2,238	224	1.18	0.83	1.93

(a) Excludes full-blood Aborigines before 1962.

Up to 1913, the rate of natural increase was rising, and this factor, coupled with the impetus given to immigration from 1911 onwards by increased government assistance, was responsible for the comparatively high annual rate of 2.04 per cent during this period. The 1914–18 War was a dominating influence in the decade 1914–23, and its effects can be seen in the reduction of the rate from 2.04 to 1.64 per cent. From 1924 to 1929, more settled and prosperous conditions were experienced: encouraged migration was resumed on a large scale and, despite a further decline in the rate of natural increase owing to the persistent fall in the birth rate, the annual rate of growth rose to 1.88 per cent. After 1929, came the economic depression, and immigration ceased—in fact, Australia actually lost people through an excess of departures over arrivals in 1930, 1931, 1932 and 1935. The rate of natural increase also fell, and the annual rate of growth of the population fell to 0.85 per cent. With the outbreak of the 1939–45 War, Australia entered a new phase in her demographic history. The immediate effect of the war was to increase the number of marriages and to reverse the downward trend in fertility. The number of births increased each war year from 1940 to 1945, and these increases

more than offset the rise in deaths due to war casualties and higher civilian death rates. As might be expected, migration over these years was negligible. The period 1947 to 1961 was marked by a continued high natural increase and a resumption of immigration, the latter resulting in very high net gains in each of the four years 1949 to 1952. During the period 1962 to 1971 net migration has continued at the same rate as in the previous decade but there was a decline in the crude birth rate and rate of natural increase from 1962, with some recovery becoming apparent towards the end of the period.

Rates of population growth from 1901 are shown for each State and Territory of Australia in the bulletin, *Demography* (see also Statistical Summary in this Year Book). Estimated rates of growth of the population of Australia in comparison with those for other countries of the world for the period 1963-1970 are shown in the table on page 147.

### Mean population

The mean populations given below are calculated for twelve-month periods to provide an average basis for calculations requiring allowance for the continuous change in population figures during such periods. Mean populations are used for the calculation of rates such as crude birth, death and marriage rates and per capita rates of consumption, income, etc.

The mean population for any year has been calculated by the formula:

$$\text{Mean population} = \frac{a + 4b + 2c + 4d + e}{12}$$

where *a*, *b*, *c*, *d*, and *e*, respectively, are the populations at the end of the quarter immediately preceding the year and at the end of each of the four succeeding quarters; e.g. in the case of a calendar year, 31 December of the preceding year, and 31 March, 30 June, 30 September and 31 December of the year under consideration. This formula gives a close approximation to the mean of a theoretical population progressing smoothly through the five values *a*, *b*, *c*, *d*, and *e*.

### MEAN POPULATION: CALENDAR YEARS, STATES AND TERRITORIES, 1967 TO 1971

Year ended 31 Dec.—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967	4,295,047	3,275,938	1,700,303	1,109,788	879,193	375,289	61,778	103,554	11,800,890
1968	4,359,513	3,325,959	1,729,126	1,122,381	914,515	379,701	67,209	112,173	12,010,577
1969	4,438,908	3,384,679	1,761,975	1,139,451	953,796	384,754	72,614	121,630	12,257,807
1970	4,521,101	3,445,558	1,792,427	1,157,874	991,720	387,749	78,606	131,741	12,506,776
1971	4,600,604	3,504,110	1,826,856	1,175,577	1,028,586	390,740	85,479	143,976	12,755,928

### MEAN POPULATION: FINANCIAL YEARS, STATES AND TERRITORIES, 1966-67 TO 1970-71

Year ended 30 June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967	4,265,673	3,249,262	1,686,884	1,103,027	863,228	373,267	59,248	99,869	11,700,458
1968	4,326,292	3,300,495	1,714,260	1,115,393	895,832	377,420	64,374	107,777	11,901,843
1969	4,396,616	3,353,656	1,745,511	1,130,913	934,432	382,440	69,998	116,812	12,130,378
1970	4,481,807	3,416,257	1,777,387	1,148,477	972,891	386,288	75,459	126,581	12,385,147
1971	4,561,436	3,475,793	1,808,962	1,167,273	1,010,668	389,254	82,213	137,439	12,633,038

## Geographic distribution of population

### Criteria for the delimitation of urban boundaries

The criteria used for delimiting urban centres, were determined by the Thirty-First Conference of Statisticians, October 1969, and are as follows.

At each Census of Population and Housing a boundary shall be defined in accordance with these Resolutions for each population cluster of 1,000 or more population (and, for known holiday resorts of less population, if they contain 250 or more dwellings of which at least 100 are occupied). These clusters shall be named *urban centres* and the population and dwellings enumerated in them shall be classified as urban for statistical purposes.

Resolution 3 stated that around each urban centre with a population of at least 100,000, a further boundary shall be defined, after consultation with planners, to contain the anticipated development of the urban centre and associated smaller urban centres for a period of at least twenty years. Such



a boundary should delimit an area which is now, or is expected to be, socially and economically oriented towards the urban centre. It shall consist of complete local government areas if possible. This fixed boundary (as distinct from the urban boundary which is moving) will delimit an area which, for general statistical purposes, is free from the practical problems imposed by the moving boundary, but which nevertheless represents the city in a wider sense.

In delimiting urban centres with 25,000 or more population:

- (a) all contiguous census collector's districts which have a population density of 500 or more persons per square mile shall be included. Consequently, State, statistical division, local government area and other administrative boundaries shall be disregarded;
- (b) a collector's district which is known to contain a high proportion of holiday homes shall be classified as urban if the dwelling density is 125 dwellings per square mile or greater;
- (c) a collector's district consisting mainly of land used for factories, airports, small sports areas, cemeteries, hostels, institutions, prisons, military camps or certain research stations shall be classified as urban if contiguous with collector's districts which are themselves urban;
- (d) any collector's district which consists mainly of land used for large sporting areas, large parks, explosives handling and munitions areas, or holding yards associated with meatworks and abattoirs shall be classified as urban only if it is bordered on three sides by collector's districts which are themselves urban;
- (e) any area which is completely surrounded by collector's districts which are urban must itself be classified as urban;
- (f) where an urban centre of 25,000 or more population is separated from another urban centre by a gap in actual development of less than two miles (by the shortest rail or road distance), the gap shall be bridged by classifying a connecting collector's district or districts as urban, and therefore treating the urban centres as one; if the gap is two or more miles (and whether or not it is comprised mainly of reserved land or a natural barrier) the urban centres shall remain separate;
- (g) any area included in an urban centre in 1971 or thereafter under the provisions of this Resolution shall continue to be so included unless the population of the urban centre falls below 25,000, in which case this Resolution will cease to apply;
- (h) large peripheral collector's districts in growth areas shall be fragmented; and so far as the availability of visible boundary features allows, the fragments so created shall be as near square-shaped as possible and of such a size that they will contain a collector's workload when fully developed. For the purposes of delimiting urban centres such fragments shall be regarded as collector's districts.

In delimiting urban centres with less than 25,000 population:

- (a) the urban centres shall be delimited subjectively (by the inspection of aerial photographs, by field inspection and/or by consideration of any other information that is available);
- (b) all continuous urban growth is to be included (which, in small urban centres, would not necessarily occur if the density criterion were applied), together with any close but non-contiguous development which could be clearly regarded as part of the centre. However, cognisance shall be taken of Resolution 3 (*see above*), where appropriate, particularly in urban centres which are approaching a population of 25,000.

In selecting the boundaries for the splitting of collector's districts, cognisance shall be taken, where appropriate, of the boundaries of land-use zones:

- (a) For State capital cities, nomenclature for the area delimited by—
  - (i) the urban, and
  - (ii) the outer boundary
 shall be (using Melbourne as the example)—
  - (i) Urban Melbourne, and
  - (ii) Melbourne Statistical Division;
- (b) In other cases where the dual boundary concept is employed, the nomenclature shall be (using Newcastle as the example)—
  - (i) Urban Newcastle, and
  - (ii) Newcastle Statistical District;
- (c) In cases where only a single boundary is delineated, the nomenclature shall be (using Cairns as the example) Urban Cairns;
- (d) Where an urban centre is formed by the coalescence of two or more named localities, the urban centre shall be assigned a name agreed upon after consultation with the Deputy Commonwealth Statistician of the State concerned.

These criteria were similar to those used at the 1966 Census, the main changes being:

- (a) the elimination of the 'indentation' provision. At the 1966 Census an indented area was included within the urban centre if the distance across the 'neck' was less than one mile;
- (b) a re-interpretation of the 'enclosure' rule. At the 1966 Census land was included within the urban centre if it was completely surrounded by the urban centre itself (or in part by the sea or a wide unbridged river). In 1971, if one part of this surround was the sea or a wide unbridged river this rule was not applied.

At the 1971 Census these concepts were used to determine the urban boundaries of all those centres expected to reach 25,000 population in 1971. These were Sydney, Broken Hill, Maitland, Newcastle, Tamworth, Wagga Wagga, Gosford-Woy Woy and Wollongong in New South Wales; Albury-Wodonga, which is in both New South Wales and Victoria; Melbourne, Geelong, Ballarat and Bendigo in Victoria; Brisbane, Bundaberg, Cairns, Mackay, Rockhampton, Toowoomba and Townsville in Queensland; Gold Coast, which is in both New South Wales and Queensland; Adelaide and Whyalla in South Australia; Perth in Western Australia; Hobart and Launceston in Tasmania; Canberra, which is in both the Australian Capital Territory and New South Wales; and Darwin in the Northern Territory.

A change in nomenclature has been made with the introduction of the term *major urban* in place of *metropolitan*. At the 1966 Census, the latter covered the capital city urban areas. At the 1971 Census *major urban* covers population living in urban centres of 100,000 or more population. Thus in New South Wales the term covers urban population in Sydney, Newcastle, Wollongong and that part of the Municipality of Queanbeyan which is included in Urban Canberra. In Victoria it refers to the urban population in Melbourne and Geelong, and in other States the capital city urban population.

The population classified as *rural* at the 1971 Census comprises those persons who were not enumerated in urban centres and who were not classified as *migratory*. The migratory population comprises those persons who, on the night of 30 June, were travelling on board ships in Australian ports, or on board ships travelling between Australian ports, or were enumerated on long-distance trains, motor coaches, or on aircraft.

#### URBAN AND RURAL POPULATION(a): STATES AND TERRITORIES, CENSUS 30 JUNE 1971p

Division	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
PERSONS									
Major urban	3,168,289	2,503,988	816,987	809,466	639,622	129,808	..	140,966	8,209,126
Other urban	895,962	562,812	630,112	182,834	196,331	156,372	55,086	..	2,679,509
Total urban	4,064,251	3,066,800	1,447,099	992,300	835,953	286,180	55,086	140,966	10,888,635
Rural	519,602	427,101	372,557	178,733	188,688	103,271	30,110	2,877	1,822,939
Migratory	5,703	2,260	3,706	1,741	2,731	423	323	..	16,887
Total	4,589,556	3,496,161	1,823,362	1,172,774	1,027,372	389,874	85,519	143,843	12,728,461
PERCENTAGES									
Major urban	69.03	71.62	44.80	69.02	62.26	33.29	..	98.00	64.50
Other urban	19.52	16.10	34.56	15.59	19.11	40.11	64.41	..	21.05
Total urban	88.55	87.72	79.36	84.61	81.37	73.40	64.41	98.00	85.55
Rural	11.32	12.22	20.43	15.24	18.37	26.49	35.21	2.00	14.32
Migratory	1.24	0.06	0.21	0.15	0.26	0.11	0.38	..	0.13
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(a) Includes Aborigines. For definition of urban, rural, etc., see explanation preceding this table.

#### Classification of urban centres by size

The following table classifies the urban centres in Australia into grades of size of population at of Censuses of 30 June 1966 and 1971. Corresponding details for each State and Territory at the 1966 Census were included in Year Book No. 54, page 127.

A table showing the aggregate urban population at the 1961 Census of all cities and towns outside the metropolitan area of each State with 2,000 or more and 3,000 or more urban inhabitants was included in Year Book No. 51, page 267. A table showing similar data for the 1954 Census was included in Year Book No. 47, page 295 and one for the 1947 Census in Year Book No. 40, page 334. Comparisons between these various tables can be made only if allowance is made for changes in the status and structure of local government areas and for changes in the manner of determining urban population at each census.

**URBAN CENTRES: NUMBER AND POPULATION(a) IN GROUPS OF VARIOUS SIZES:  
AUSTRALIA, CENSUSES 1966 AND 1971**

Population size of urban centres	Census, 30 June 1966			Census, 30 June 1971		
	No. of urban centres	Population	Percentage of Australian population	No. of urban centres	Population p	Percentage of Australian population
500,000 and over . . . . .	5	6,500,547	56.04	5	7,372,085	57.92
100,000-499,999 . . . . .	4	620,705	5.35	5	837,041	6.58
75,000- 99,999 . . . . .	1	92,311	0.80	..	..	..
50,000- 74,999 . . . . .	5	279,031	2.41	5	320,721	2.52
25,000- 49,999 . . . . .	6	205,983	1.78	12	407,598	3.20
20,000- 24,999 . . . . .	11	246,891	2.13	8	177,438	1.39
15,000- 19,999 . . . . .	16	269,449	2.32	16	275,944	2.17
10,000- 14,999 . . . . .	18	214,369	1.85	22	259,531	2.04
5,000- 9,999 . . . . .	62	450,173	3.88	66	466,385	3.66
2,500- 4,999 . . . . .	101	351,765	3.03	108	372,828	2.93
2,000- 2,499 . . . . .	51	112,983	0.97	53	117,670	0.92
1,000- 1,999 . . . . .	178	253,923	2.19	181	259,054	2.04
Less than 1,000(b) . . . . .	27	18,873	0.16	35	22,340	0.18
<b>Total urban population</b>	<b>485</b>	<b>9,617,003</b>	<b>82.91</b>	<b>516</b>	<b>10,888,635</b>	<b>85.55</b>
Cumulative—						
500,000 and over . . . . .	5	6,500,547	56.04	5	7,372,085	57.92
100,000 " " " " . . . . .	9	7,121,252	61.39	10	8,209,126	64.49
75,000 " " " " . . . . .	10	7,213,563	62.19	10	8,209,126	64.49
50,000 " " " " . . . . .	15	7,492,594	64.59	15	8,529,847	67.01
25,000 " " " " . . . . .	21	7,698,577	66.37	27	8,937,445	70.22
20,000 " " " " . . . . .	32	7,945,468	68.50	35	9,114,883	71.61
15,000 " " " " . . . . .	48	8,214,917	70.82	51	9,390,827	73.78
10,000 " " " " . . . . .	66	8,429,286	72.67	73	9,650,358	75.82
5,000 " " " " . . . . .	128	8,879,459	75.55	139	10,116,743	79.48
2,500 " " " " . . . . .	229	9,231,224	79.58	247	10,489,571	82.41
2,000 " " " " . . . . .	280	9,344,207	80.56	300	10,607,241	83.33
1,000 " " " " . . . . .	458	9,598,130	82.75	481	10,866,295	85.37
<b>Total urban population</b>	<b>485</b>	<b>9,617,003</b>	<b>82.91</b>	<b>516</b>	<b>10,888,635</b>	<b>85.55</b>

(a) Includes Aborigines.

(b) Urban centres classified as such on grounds other than population and density.

**Selected population centres**

The following table shows the population of selected population centres in each State and Territory of Australia at the censuses of 30 June 1966 and 1971.

At the Census of 30 June 1966 new methods were used to define the boundaries of capital city and other urban areas for statistical purposes. These methods, and modifications made for the 1971 Census, are described on pages 131-3.

Annual post-censal population estimates are made for all local government areas. Copies of publications showing the estimated population of local government areas, statistical divisions and statistical districts can be obtained from the office of the Deputy Commonwealth Statistician in each capital city.

For the urban centres recognised at the census but not definable in terms of local government area boundaries, only a few post-censal estimates are available. For the capital cities and for some other cities and towns the definition of urban boundaries has resulted in the urban population as delineated at the 1971 Census being significantly larger than the population within the corresponding local government area of the same name. For further details see also *Field Count Statements Nos. 3-9, Census of Population and Housing, 30 June 1971.*



**SELECTED POPULATION CENTRES EXCEEDING 10,000 URBAN POPULATION  
STATES AND TERRITORIES, CENSUSES, 30 JUNE 1966 AND 1971 p**

Population centres	Population at 30 June		Population centres	Population at 30 June	
	1966	1971p		1966	1971p
<b>NEW SOUTH WALES—</b>			<b>QUEENSLAND—</b>		
Sydney Statistical Division . . .	2,542,207	2,799,634	Brisbane Statistical Division . . .	778,193	866,207
Urban Sydney . . .	2,447,219 (a)	2,717,069	Urban Brisbane(f) . . .	716,402	816,987
Urban Richmond-Windsor . . .	9,935	11,357	<i>Urban Centres, Rest of State—</i>		
Newcastle Statistical District . . .	327,540	351,010	Bundaberg . . .	24,334	26,570
Urban Newcastle . . .	234,005	249,962	Cairns . . .	28,719	32,570
Urban Cessnock-Bellbird . . .	15,332	16,141	Gladstone . . .	12,470	15,365
Urban Kurri Kurri-Weston . . .	11,567	11,624	Gold Coast-part(g) . . .	49,358	68,974
Urban Maitland . . .	22,440	24,530	Gympie . . .	11,286	11,131
Wollongong Statistical District . . .	177,456	198,768	Mackay . . .	24,584	28,416
Urban Wollongong . . .	162,171	185,890	Maryborough . . .	20,404	19,962
<i>Urban Centres, Rest of State—</i>			Mount Isa . . .	16,952	25,240
Albury-Wodonga-part(b) . . .	23,379	27,383	Rockhampton . . .	45,412	48,188
Armidale . . .	15,360	18,137	Toowoomba . . .	52,145	57,543
Bathurst . . .	17,230	17,169	Townsville . . .	56,930	68,442
Broken Hill . . .	30,043	29,743	<b>SOUTH AUSTRALIA—</b>		
Budgewoi Lake . . .	6,659	10,244	Adelaide Statistical Division . . .	771,595	842,611
Canberra-part(c) . . .	12,515	15,368	Urban Adelaide . . .	728,279 (h)	809,466
Coff's Harbour . . .	7,683	10,107	<i>Urban Centres, Rest of State—</i>		
Dubbo . . .	15,623	17,767	Mount Gambier . . .	17,261	17,867
Gosford-Woy Woy(d) . . .	27,875	38,093	Port Augusta . . .	10,457	12,095
Goulburn . . .	20,871	21,568	Port Pirie . . .	15,567	15,506
Grafton . . .	15,987	16,354	Whyalla . . .	22,131	32,085
Griffith . . .	9,553	11,015	<b>WESTERN AUSTRALIA—</b>		
Katoomba-Wentworth Falls . . .	10,525	11,573	Perth Statistical Division . . .	559,298	701,392
Lismore . . .	19,757	20,901	Urban Perth . . .	500,246	639,622
Lithgow . . .	13,165	13,135	Urban Kwinana New Town . . .	4,144	10,096
Nowra-Bomaderry . . .	9,641	12,866	Urban Rockingham . . .	5,039	11,990
Orange . . .	22,208	24,154	<i>Urban Centres, Rest of State—</i>		
Tamworth . . .	20,588	24,649	Albany . . .	11,440	13,055
Taree . . .	10,594	11,914	Bunbury . . .	15,467	17,762
The Entrance . . .	9,131	13,661	Geraldton . . .	12,196	15,330
Wagga Wagga . . .	24,904	27,636	Kalgoorlie-Boulder . . .	19,980	20,784
<b>VICTORIA—</b>			<b>TASMANIA—</b>		
Melbourne Statistical Division . . .	2,230,793	2,497,993	Hobart Statistical Division . . .	141,311	153,024
Urban Melbourne . . .	2,108,401	2,388,941	Urban Hobart . . .	119,469	129,808
Urban Werribee . . .	8,233	12,868	<i>Urban Centres, Rest of State—</i>		
Geelong Statistical District . . .	111,365	121,966	Burnie-Somerseset . . .	18,042	20,088
Urban Geelong . . .	105,060	115,047	Devonport . . .	14,875	18,150
<i>Urban Centres, Rest of State—</i>			Launceston . . .	60,456	62,181
Ballarat . . .	56,312	58,434	<b>NORTHERN TERRITORY—</b>		
Bendigo . . .	41,902	45,860	Urban Darwin . . .	21,205	35,281
Colac . . .	9,499	10,418	Urban Alice Springs . . .	6,390	11,118
Horsham . . .	10,562	11,046	<b>AUSTRALIAN CAPITAL</b>		
Mildura . . .	12,934	13,190	<b>TERRITORY—</b>		
Moe-Yallourn . . .	23,222	20,764	Canberra Statistical District(i) . . .	107,138	158,594
Morwell . . .	16,635	16,827	Urban Canberra-part . . .	92,311	140,966
Sale . . .	8,708	10,404			
Shepparton . . .	17,488	19,409			
Traralgon . . .	14,080	14,624			
Wangaratta . . .	15,268	15,535			
Warrnambool . . .	17,500	18,663			
Albury-Wodonga-part(e) . . .	8,653	10,533			

(a) Urban Glenbrook-Falconbridge (population, 13,732 at 1966) has been absorbed by urban Sydney since 1966.  
 (b) That part of urban Albury-Wodonga in New South Wales. The total population of urban Albury-Wodonga was 37,916 at 30 June 1971.  
 (c) The urban centre of Queanbeyan in New South Wales has been absorbed since 1966 by Urban Canberra.  
 (d) Consists largely of an amalgamation of the former Gosford and Woy Woy-Umina urban centres.  
 (e) That part of urban Albury-Wodonga in Victoria.  
 (f) Includes Ipswich, 60,017 persons at 30 June 1971 (urban part of Ipswich local government area).  
 (g) That part of urban Gold Coast located in Queensland. The total population of urban Gold Coast was 74,121 at 30 June 1971.  
 (h) Urban Reynella-Port Noarlunga (population, 11,834 at 1966) has been absorbed by urban Adelaide since 1966.  
 (i) Includes Queanbeyan municipality in New South Wales.

### Principal cities of the world

The following table shows the population of the world's largest cities at the latest available date. The data refer to urban agglomerations, where available; in other cases the so-called city proper. The urban agglomeration is defined on page 29 of the United Nations *Demographic Yearbook* 1970, from which most of the figures in the table have been taken, as including also the suburban fringe or thickly settled territory lying outside of, but adjacent to, the city boundaries. (See also the Technical Notes on Statistical Tables and footnotes to the table in the *Demographic Yearbook*). International comparability is limited by different methods used in constructing the estimates, variations in national concepts of urban boundaries, and the different dates to which the statistics refer.

## POPULATION OF THE WORLD'S LARGEST CITIES

City	Country	Year	Population ('000)	City	Country	Year	Population ('000)
Tokyo	Japan	1969	11,454	Teheran	Iran	1966	(a)2,720
New York	U.S.A.	1970	11,448	Rome	Italy	1969	2,707
Paris	France	1968	8,197	Montreal	Canada	1969	2,553
Buenos Aires	Argentina	1970	8,191	Santiago	Chile	1969	2,516
London	England	1971	7,379	Melbourne	Australia	1971	(b)2,498
Moscow	U.S.S.R.	1970	7,061	Lima	Peru	1969	2,416
Los Angeles	U.S.A.	1970	6,974	Shenyang	China	1957	(a)2,411
Shanghai	China	1957	(a)6,900	Manchester	England	1971	2,387
Chicago	U.S.A.	1970	6,893	Pittsburg	U.S.A.	1970	2,384
Bombay	India	1970	(a)5,700	Birmingham	England	1971	2,369
Sao Paulo	Brazil	1968	5,685	St Louis	U.S.A.	1970	2,331
Calcutta	India	1968	5,075	Toronto	Canada	1969	2,316
Cairo	U.A.R.	1970	(a)4,961	Bogota	Columbia	1969	(a)2,294
Philadelphia	U.S.A.	1970	4,777	Wuhan	China	1957	(a)2,146
Rio de Janeiro	Brazil	1968	4,207	Yokohama	Japan	1969	2,144
Detroit	U.S.A.	1970	4,164	West Berlin(c)	Germany	1969	(a)2,135
Peking	China	1957	(a)4,010	Chungking	China	1957	(a)2,121
Leningrad	U.S.S.R.	1970	3,950	Madras	India	1970	(a)2,086
Seoul	Korea	1966	(a)3,795	Caracas	Venezuela	1969	2,064
Delhi	India	1970	(a)3,772	Baltimore	U.S.A.	1970	2,045
Tientsin	China	1957	(a)3,220	Istanbul	Turkey	1965	2,043
San Francisco	U.S.A.	1970	3,070	Cleveland	U.S.A.	1970	2,043
Karachi	Pakistan	1969	3,060	Alexandria	U.A.R.	1970	(a)2,032
Mexico City	Mexico	1970	3,026	Singapore	Singapore	1969	(a)2,017
Osaka	Japan	1969	3,018	Nagoya	Japan	1969	2,014
Madrid	Spain	1969	2,939	Houston	U.S.A.	1970	1,958
Djakarta	Indonesia	1961	(a)2,907	Budapest	Hungary	1969	(a)1,934
Washington	U.S.A.	1970	2,836	Manila	Philippines	1957	1,865
Sydney	Australia	1971	(b)2,800	Athens	Greece	1961	1,853
Boston	U.S.A.	1970	2,730	Newark	U.S.A.	1970	1,848

(a) City proper. (b) Statistical Division. Preliminary Census figure. (c) East Berlin, 1969, population of city proper, 1,083,173.

## Sex distribution of the population

The number of males to each hundred females has been adopted as a measure of the 'masculinity' of the population. With the exception of some dislocation arising from the two World Wars, there was a continuous diminution of the masculinity of the population until 1945. This resulted mainly from a decline in the proportion of overseas-born in the population and in their masculinity. At the census of 1901 the overseas-born comprised 23 per cent of the population and had a masculinity of 151 per cent. By 1947 these proportions had declined to 10 per cent and 127 per cent, with a consequent decline in the masculinity of the total population. Although the proportion of overseas-born has increased since 1947, with the resumption of immigration, its masculinity has declined and there has thus been little change in the masculinity of the total population.

POPULATION(a): MASCULINITY, STATES AND TERRITORIES, DECEMBER 1945 TO 1971  
(Number of males per 100 females)

31 Dec.—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1945 . .	99.75	97.50	105.45	98.21	105.49	101.15	220.16	115.86	100.36
1950 . .	100.88	99.27	106.02	101.83	106.07	102.70	188.05	123.33	101.83
1955 . .	101.27	101.38	105.17	102.78	105.87	103.63	163.88	107.77	102.52
1960 . .	101.38	101.35	104.16	102.24	103.99	102.88	147.82	111.51	102.22
1965 . .	100.68	100.52	102.99	101.03	103.99	101.83	123.36	108.70	101.43
1967 . .	100.59	100.26	102.53	100.49	104.50	101.58	125.70	105.68	101.25
1968 . .	100.61	100.21	102.27	100.26	104.76	101.47	126.91	104.98	101.22
1969 . .	100.59	100.16	102.08	100.06	104.99	101.42	128.16	105.15	101.19
1970 . .	100.55	100.08	101.87	99.82	105.23	101.38	128.53	104.72	101.14
1971 . .	100.47	99.93	101.74	99.72	105.11	101.17	127.38	105.00	101.04

(a) Excludes full-blood Aboriginies before 1961.

The masculinity of the population in certain countries of the world is shown in the table on page 147.

## Age distribution of the population

The next table shows the changes which have taken place in the age distribution of the population of Australia at each census since 1871.

**POPULATION(a): PROPORTIONAL AGE DISTRIBUTION, AUSTRALIA 1871 TO 1966**  
(Per cent)

Census	Males				Females				Persons			
	Under 15 years	15 years and under 65	65 years and over	Total	Under 15 years	15 years and under 65	65 years and over	Total	Under 15 years	15 years and under 65	65 years and over	Total
1871 . . .	38.84	59.11	2.05	100	46.02	52.60	1.38	100	42.09	56.17	1.74	100
1881 . . .	36.43	60.78	2.79	100	41.91	56.04	2.04	100	38.95	58.60	2.44	100
1891 . . .	34.82	61.96	3.22	100	39.40	58.03	2.57	100	36.94	60.14	2.92	100
1901 . . .	33.89	61.78	4.33	100	36.52	59.82	3.66	100	35.14	60.85	4.01	100
1911 . . .	30.89	64.74	4.37	100	32.49	63.27	4.24	100	31.66	64.03	4.31	100
1921 . . .	31.67	63.86	4.46	100	31.80	63.83	4.37	100	31.73	63.85	4.42	100
1933 . . .	27.53	66.09	6.38	100	27.42	65.99	6.59	100	27.48	66.04	6.48	100
1947 . . .	25.48	67.08	7.43	100	24.62	66.71	8.67	100	25.06	66.90	8.05	100
1954 . . .	28.81	63.82	7.37	100	28.23	62.52	9.25	100	28.52	63.17	8.30	100
1961 . . .	30.61	62.16	7.23	100	29.85	60.34	9.82	100	30.23	61.26	8.51	100
1966 . . .	29.88	63.03	7.09	100	28.86	61.13	10.01	100	29.37	62.09	8.54	100

(a) Excludes full-blood Aborigines.

Estimates of the age distribution of population, based on the census distribution of ages and records of births, ages at death, and ages of migrants, are made for intercensal years. The following estimated age distributions of the Australian population at 30 June 1969 and 1970 will be subject to revision when the 1971 Census results for distribution of ages become available.

**POPULATION: ESTIMATED AGE DISTRIBUTION(a), AUSTRALIA**

Age last birthday (years)	30 June 1969			30 June 1970		
	Males	Females	Persons	Males	Females	Persons
0-4 . . .	596,741	567,675	1,164,416	610,394	581,227	1,191,621
5-9 . . .	632,087	600,765	1,232,852	634,282	602,880	1,237,162
10-14 . . .	594,026	565,908	1,159,934	610,758	580,376	1,191,134
15-19 . . .	559,174	534,550	1,093,724	568,281	543,441	1,111,722
20-24 . . .	534,263	504,181	1,038,444	556,943	524,240	1,081,183
25-29 . . .	436,119	404,098	840,217	460,655	427,075	887,730
30-34 . . .	387,468	364,169	751,637	402,114	375,736	777,850
35-39 . . .	380,187	352,115	732,302	376,168	350,424	726,592
40-44 . . .	408,372	379,485	787,857	408,251	377,248	785,499
45-49 . . .	384,421	370,618	755,039	393,198	378,978	772,176
50-54 . . .	318,431	319,492	637,923	320,870	320,273	641,143
55-59 . . .	298,048	296,631	594,679	303,672	306,494	610,166
60-64 . . .	236,754	240,515	477,269	242,920	246,986	489,906
65-69 . . .	171,568	198,194	369,762	176,222	199,950	376,172
70-74 . . .	119,316	166,254	285,570	122,344	168,826	291,170
75-79 . . .	77,672	124,582	202,254	76,187	126,253	202,440
80-84 . . .	41,997	73,705	115,702	42,850	76,108	118,958
85 and over . . .	17,993	38,705	56,698	18,462	40,621	59,083
<b>Total . . .</b>	<b>6,194,637</b>	<b>6,101,642</b>	<b>12,296,279</b>	<b>6,324,571</b>	<b>6,227,136</b>	<b>12,551,707</b>

(a) Based on the age distribution of all persons enumerated at the Census of 30 June 1966 adjusted for mis-statement of age and on subsequent births, recorded ages at death and recorded ages of migrants.

**General characteristics of the population, censuses 1961 and 1966**

Particulars of the characteristics of the population of Australia at the 1966 Census compared with the 1961 Census are shown in this section. Corresponding information for the individual States and Territories is shown in Year Book No. 54. Information concerning the industry, occupational status, and occupations of the population as recorded at the 1966 Census is given in the chapter Employment and Unemployment, and on dwellings in the chapter Housing and Building. Comparable statistics from the 1971 Census of Population and Housing were not available when this chapter was sent for press. For any available details from the 1971 Census see Appendix.

The characteristics dealt with in the following pages are: age; marital status; country of birth; period of residence in Australia of overseas born; nationality; religion. Further details are available in a series of mimeographed bulletins which are available from the Bureau. All tables exclude particulars of full-blood Aborigines.



## POPULATION: AGE (GROUPED AGES)(a), BY SEX, AUSTRALIA, CENSUSES, 1961 AND 1966

Age last birthday (years)	Census, 30 June 1961			Census, 30 June 1966			Increase 1961-1966
	Males	Females	Persons	Males	Females	Persons	
0-4 . . .	567,742	541,751	1,109,493	585,949	557,195	1,143,144	33,651
5-9 . . .	536,046	511,475	1,047,521	595,538	567,358	1,162,896	115,375
10-14 . . .	522,407	497,577	1,019,984	556,251	530,197	1,086,448	66,464
15-19 . . .	414,788	394,145	808,933	536,848	511,378	1,048,226	239,293
20-24 . . .	361,531	335,907	697,438	436,709	417,232	853,941	156,503
25-29 . . .	342,443	313,628	656,071	384,336	361,729	746,065	89,994
30-34 . . .	386,175	351,793	737,968	355,654	331,700	687,354	-50,614
35-39 . . .	395,247	372,669	767,916	397,463	367,099	764,562	-3,354
40-44 . . .	343,973	334,554	678,527	396,536	377,215	773,751	95,224
45-49 . . .	335,890	321,941	657,831	343,033	334,639	677,672	19,841
50-54 . . .	293,004	275,023	568,027	323,810	317,824	641,634	73,607
55-59 . . .	238,051	225,330	463,381	276,100	266,916	543,016	79,635
60-64 . . .	190,805	210,048	400,853	215,590	219,759	435,349	34,496
65-69 . . .	149,130	184,654	333,784	161,376	195,020	356,396	22,612
70-74 . . .	116,939	148,048	264,987	115,084	160,887	275,971	10,984
75-79 . . .	69,223	95,724	164,947	79,634	116,753	196,387	31,440
80-84 . . .	33,069	52,627	85,696	38,568	64,296	102,864	17,168
85 and over . . .	15,789	29,040	44,829	17,880	36,906	54,786	9,957
Total . . .	5,312,252	5,195,934	10,508,186	5,816,359	5,734,103	11,550,462	1,042,276

(a) Recorded ages adjusted by the distribution of ages 'not stated'.

Minus sign (-) denotes decrease.

## POPULATION: MARITAL STATUS, BY SEX, AUSTRALIA, CENSUSES, 1961 AND 1966

Marital status	Census, 30 June 1961			Census, 30 June 1966			Increase 1961-1966
	Males	Females	Persons	Males	Females	Persons	
Never married—							
Under 15 years of age . . .	1,626,195	1,550,803	3,176,998	1,737,738	1,654,750	3,392,488	215,490
15 years of age and over . . .	1,098,450	770,048	1,868,498	1,246,214	899,354	2,145,568	277,070
Total never married . . .	2,724,645	2,320,851	5,045,496	2,983,952	2,554,104	5,538,056	492,560
Married . . .	2,364,710	2,344,754	4,709,464	2,592,236	2,578,488	5,170,724	461,260
Married but permanently separated(a) . . .	68,172	78,367	146,539	75,149	87,218	162,367	15,828
Divorced . . .	38,640	43,339	81,979	42,885	51,143	94,028	12,049
Widowed . . .	116,085	408,623	524,708	122,137	463,150	585,287	60,579
Grand total . . .	5,312,252	5,195,934	10,508,186	5,816,359	5,734,103	11,550,462	1,042,276

(a) Legally or otherwise.

## POPULATION: COUNTRY OF BIRTH, BY SEX, AUSTRALIA, CENSUSES, 1961 AND 1966

Country of birth	Census, 30 June 1961			Census, 30 June 1966			Increase 1961-1966
	Males	Females	Persons	Males	Females	Persons	
Australia . . .	4,325,005	4,404,401	8,729,406	4,663,212	4,756,330	9,419,542	690,136
New Zealand . . .	23,377	23,634	47,011	26,174	26,311	52,485	5,474
Europe—							
United Kingdom and Republic of Ireland(a)	400,491	354,911	755,402	474,427	434,237	908,664	153,262
Germany . . .	57,579	51,736	109,315	55,799	52,910	108,709	-606
Greece . . .	43,593	33,740	77,333	73,936	66,153	140,089	62,756
Italy . . .	134,624	93,672	228,296	150,138	117,187	267,325	39,029
Malta . . .	22,628	16,709	39,337	31,028	24,076	55,104	15,767
Netherlands . . .	56,811	45,272	102,083	55,189	44,360	99,549	-2,534
Poland . . .	36,395	23,654	60,049	36,496	25,145	61,641	1,592
Other . . .	134,185	90,212	224,397	147,921	104,509	252,430	28,033
Total Europe . . .	886,306	709,906	1,596,212	1,024,934	868,577	1,893,511	297,299
Other countries . . .	77,564	57,993	135,557	102,039	82,885	184,924	49,367
Total born outside Australia . . .	987,247	791,533	1,778,780	1,153,147	977,773	2,130,920	352,140
Grand total . . .	5,312,252	5,195,934	10,508,186	5,816,359	5,734,103	11,550,462	1,042,276

(a) Includes Ireland (undefined).

Minus sign (-) denotes decrease.

POPULATION: OVERSEAS-BORN, BY PERIOD OF RESIDENCE IN AUSTRALIA, AND SEX  
CENSUSES, 1961 AND 1966

Period of residence (years)	Census, 30 June 1961			Census, 30 June 1966			Increase 1961-1966
	Males	Females	Persons	Males	Females	Persons	
Under 1 . . . . .	72,162	51,169	123,331	88,608	73,252	161,860	38,529
1 and under 2 . . . . .	48,600	38,366	86,966	65,980	58,361	124,341	37,375
2 " " 3 . . . . .	47,126	42,901	90,027	58,366	51,963	110,329	20,302
3 " " 4 . . . . .	37,736	41,254	78,990	46,104	41,934	88,038	9,048
4 " " 5 . . . . .	42,600	41,284	83,884	35,623	37,279	72,902	-10,982
5 years and over . . . . .	717,961	560,573	1,278,534	833,170	693,902	1,527,072	248,538
Not stated . . . . .	21,062	15,986	37,048	25,296	21,082	46,378	9,330
<b>Total . . . . .</b>	<b>987,247</b>	<b>791,533</b>	<b>1,778,780</b>	<b>1,153,147</b>	<b>977,773</b>	<b>2,130,920</b>	<b>352,140</b>

Minus sign (-) denotes decrease.

POPULATION: NATIONALITY (i.e. ALLEGIANCE), BY SEX  
AUSTRALIA, CENSUSES, 1961 AND 1966

Nationality	Census, 30 June 1961			Census, 30 June 1966			Increase 1961-1966
	Males	Females	Persons	Males	Females	Persons	
British(a)—							
Born in Australia . . . . .	4,325,005	4,404,401	8,729,406	4,663,212	4,756,330	9,419,542	690,136
Born outside Australia . . . . .	686,611	568,692	1,255,303	871,263	748,582	1,619,845	364,542
<b>Total British . . . . .</b>	<b>5,011,616</b>	<b>4,973,093</b>	<b>9,984,709</b>	<b>5,534,475</b>	<b>5,504,912</b>	<b>11,039,387</b>	<b>1,054,678</b>
Foreign—							
Dutch . . . . .	41,216	34,601	75,817	25,941	22,014	47,955	-27,862
German . . . . .	34,317	26,172	60,489	24,262	18,559	42,821	-17,668
Greek . . . . .	32,763	28,238	61,001	53,344	53,333	106,677	45,676
Hungarian . . . . .	8,210	5,816	14,026	3,411	2,353	5,764	-8,262
Italian . . . . .	86,941	67,068	154,009	81,632	71,781	153,413	-596
Latvian, Lithuanian and Estonian . . . . .	4,176	2,936	7,112	1,751	1,068	2,819	-4,293
Polish . . . . .	12,939	9,474	22,413	7,784	5,998	13,782	-8,631
Yugoslav . . . . .	17,745	9,637	27,382	24,024	14,229	38,253	10,871
Other (incl. Stateless) . . . . .	62,329	38,899	101,228	59,735	39,856	99,591	-1,637
<b>Total foreign . . . . .</b>	<b>300,636</b>	<b>222,841</b>	<b>523,477</b>	<b>281,884</b>	<b>229,191</b>	<b>511,075</b>	<b>-12,402</b>
<b>Grand total . . . . .</b>	<b>5,312,252</b>	<b>5,195,934</b>	<b>10,508,186</b>	<b>5,816,359</b>	<b>5,734,103</b>	<b>11,550,462</b>	<b>1,042,276</b>

(a) All persons of individual citizenship status who, by virtue of the *Nationality and Citizenship Act 1948-1966*, are deemed to be British subjects. Includes naturalised British. For purposes of this table Irish nationality is included with British.

Minus sign (-) denotes decrease.

POPULATION: RELIGIOUS DENOMINATION, BY SEX, AUSTRALIA  
CENSUSES, 1961 AND 1966

Religious denomination	Census, 30 June 1961			Census, 30 June 1966			Increase 1961-1966
	Males	Females	Persons	Males	Females	Persons	
Christian—							
Baptist . . . . .	70,990	78,638	149,628	78,053	87,434	165,487	15,859
Brethren . . . . .	7,265	8,228	15,493	7,434	8,082	15,516	23
Catholic, Roman(a) . . . . .	602,763	536,886	1,139,649	581,934	522,035	1,103,969	-35,680
Catholic(a) . . . . .	730,093	750,242	1,480,335	947,796	984,365	1,932,161	451,826
Churches of Christ . . . . .	45,115	50,518	95,633	48,207	54,338	102,545	6,912
Church of England . . . . .	1,834,732	1,834,208	3,668,940	1,929,663	1,947,810	3,877,473	208,533
Congregational . . . . .	34,679	38,847	73,526	35,911	40,677	76,588	3,062
Orthodox . . . . .	84,965	69,959	154,924	135,618	119,875	255,493	100,569
Lutheran . . . . .	82,453	77,729	160,182	90,019	87,305	177,324	17,142
Methodist . . . . .	528,003	548,392	1,076,395	548,392	575,918	1,124,310	47,915
Presbyterian . . . . .	482,503	494,218	976,721	511,993	531,577	1,043,570	66,849
Salvation Army . . . . .	24,379	26,735	51,114	27,078	29,423	56,501	5,387
Seventh-day Adventist . . . . .	14,313	17,320	31,633	16,948	20,669	37,617	5,984
Protestant (undefined) . . . . .	50,515	48,048	98,563	52,956	52,267	105,223	6,660
Other (including Christian undefined) . . . . .	48,626	52,779	101,405	63,769	67,492	131,261	29,856
<b>Total Christian . . . . .</b>	<b>4,641,394</b>	<b>4,632,747</b>	<b>9,274,141</b>	<b>5,075,771</b>	<b>5,129,267</b>	<b>10,205,038</b>	<b>930,897</b>
Non-Christian—							
Hebrew . . . . .	29,571	29,758	59,329	31,301	31,970	63,271	3,942
Other . . . . .	6,547	2,928	9,475	8,515	4,597	13,112	3,637
<b>Total non-Christian . . . . .</b>	<b>36,118</b>	<b>32,686</b>	<b>68,804</b>	<b>39,816</b>	<b>36,567</b>	<b>76,383</b>	<b>7,579</b>
Indefinite . . . . .	13,495	11,267	24,762	19,641	16,409	36,050	11,288
No religion . . . . .	25,206	12,344	37,550	60,524	33,567	94,091	56,541
No reply . . . . .	596,039	506,890	1,102,929	620,607	518,293	1,138,900	35,971
<b>Grand total . . . . .</b>	<b>5,312,252</b>	<b>5,195,934</b>	<b>10,508,186</b>	<b>5,816,359</b>	<b>5,734,103</b>	<b>11,550,462</b>	<b>1,042,276</b>

(a) So described in individual census schedules.

Minus sign (-) denotes decrease.

## The Aboriginal population of Australia

In Year Book No. 17, pages 951–61, a brief account was given of the Australian Aboriginal population, its origin, its numbers as estimated from time to time and the steps taken for its protection. On pages 914–16 of Year Book No. 22 particulars were shown for each of the States and Territories of Australia at successive periods, while a special article dealing with the estimated number and distribution of the native population at the date of first settlement of the white race in the continent appeared on pages 687–96 of Year Book No. 23.

Aborigines have been enumerated in all censuses of the Commonwealth, but the degree of coverage and information obtained has varied substantially since 1911. Since the census taken in 1933 the adequacy of the particulars obtained has improved progressively as a result of an increasing number of Aborigines coming into contact with more populated areas.

At the 1966 Census extensive arrangements were made to obtain as full a coverage of Aborigines as possible and to enumerate fully those Aborigines 'out of contact'. Throughout Australia the assistance of Aboriginal welfare bodies, mission superintendents, station owners, patrol officers, and police was sought in an effort to include all Aborigines and to obtain complete information about them, e.g. in the Northern Territory information was obtained from missions and settlements concerning Aborigines normally resident at such locations but who were absent at the time of the census, and of Aborigines resident at such locations but who normally resided elsewhere. The two sets of information were then reconciled to produce what is considered to be a fairly complete and accurate coverage of Aborigines in the Territory.

### Selected characteristics

For details of certain selected characteristics derived from the 1966 Census see Year Book No. 56, pages 138–42. Details of all characteristics enumerated, together with details for States and Territories, and comparisons between the Aboriginal population and the total population, may be found in the publication *The Aboriginal Population of Australia* (Reference No. 2.23).

At censuses prior to the 1966 Census, the instructions relating to race were insufficient to enable respondents to classify themselves according to degree of race mixture. For example, from 1933 to 1961 persons were asked to state:

'For persons of European Race, wherever born, write "European". For non-Europeans state the race to which they belong, for example, "Aboriginal", "Chinese", "Negro", "Afghan", etc. If the person is half-caste with one parent of European race, write also "H.C.", for example, "H.C. Aboriginal", "H.C. Chinese", etc.'

At the 1966 Census the instructions were redesigned as follows in an endeavour to obtain precise data on race mixture and also to avoid the opprobrium attaching to the term 'half-caste':

'State each person's race. For persons of European race wherever born, write "European". Otherwise state whether Aboriginal, Chinese, Indian, Japanese, etc., as the case may be. If of more than one race give particulars, for example,  $\frac{1}{2}$  European— $\frac{1}{2}$  Aboriginal,  $\frac{3}{4}$  Aboriginal— $\frac{1}{4}$  Chinese,  $\frac{1}{2}$  European— $\frac{1}{2}$  Chinese.'

Investigations made by matching the replies of individuals at the 1961 and 1966 Censuses and by comparing overall census results with data available from the State instrumentalities responsible for Aboriginal welfare suggest that considerable doubt attaches to the validity of the replies given to the question on race at the 1966 and previous censuses.

It was concluded:

- (a) that reporting by Aborigines in the 1966 Census was insufficiently precise to differentiate persons who are 50 per cent Aboriginal from those who are more than 50 per cent Aboriginal;
- (b) that similar dissections obtained at censuses prior to the 1966 Census were similarly imprecise; and
- (c) that even a total of all persons who are 50 per cent or more Aboriginal may be suspect, primarily because of the inclusion of persons who are less than 50 per cent Aboriginal and described themselves simply as 'Aboriginal', but also because of persons who are 50 per cent Aboriginal stating their race as 'European'.

Nevertheless, the statistics herein, which relate to persons who have described themselves as 50 per cent or more Aboriginal or simply as 'Aboriginal', are presented subject to these limitations.



The following table shows particulars of the Aboriginal population of Australia at the Censuses of 30 June, 1954, 1961, and 1966. Because of some doubt about the accuracy of separate figures for full-blood and half-blood Aborigines as shown in previous issues of the Year Book, their separate publication has been discontinued. Torres Strait Islanders are not included in this table, but are included in the census figures shown elsewhere in this chapter. At the 1966 Census they numbered 5,403 persons.

ABORIGINAL POPULATION(a): STATES AND TERRITORIES  
CENSUSES, 1954, 1961 AND 1966

State or Territory	Census, 1954(a)			Census, 1961(a)			Census, 1966(b)		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
New South Wales	6,278	5,935	12,213	7,494	7,222	14,716	7,343	6,876	14,219
Victoria	691	704	1,395	899	897	1,796	856	934	1,790
Queensland	8,368	7,781	16,149	10,146	9,550	19,696	9,644	9,359	19,003
South Australia	1,675	1,537	3,212	2,607	2,277	4,884	2,914	2,591	5,505
Western Australia	6,564	6,135	12,699	8,351	7,925	16,276	9,505	8,934	18,439
Northern Territory	5,990	5,798	11,788	9,013	8,747	17,760	10,651	10,468	21,119
Australia(c)	29,716	28,006	57,722	38,612	36,697	75,309	40,984	39,223	80,207

(a) Prior to the 1966 Census, Aborigines 'out of contact' were not enumerated and estimates of these were made by authorities responsible for native welfare. It is estimated that at the 1954 Census 12,956 Aborigines (of which 2,311 were estimated to be in Queensland, 1,760 in South Australia, 3,516 in Western Australia and 5,369 in the Northern Territory) were not contacted by census collectors and were not included in the Census. Increasing numbers, however, were coming into contact and at the 1961 Census it is estimated that 2,000 Aborigines in Western Australia and 1,944 in the Northern Territory were not contacted by census collectors. At the 1966 Census, efforts were made to obtain complete coverage. (b) The figures relate to those persons who described themselves in the 1966 Census as being 50 per cent or more Aboriginal or simply as 'Aboriginal'. For reasons stated above, it has not been possible to differentiate between persons who are 50 per cent Aboriginal from those who are more than 50 per cent Aboriginal. (c) Includes Tasmania and the Australian Capital Territory.

### 1971 Census of Population and Housing

In view of the limitations on the statistics described above, an attempt was made for the 1971 Census to design a question which would obtain more meaningful data on the Aboriginal population. The advice of expert bodies approached was that such data would be obtained by asking each respondent to indicate the race to which he considered himself to belong.

In addition the repeal of Section 127 of the Constitution in 1967 removed the need for the question on racial origin to identify 'Aboriginal natives'. ('Aboriginal natives', the term used in the Constitution, was interpreted as those persons possessing more than 50 per cent Aboriginal blood).

The question at the 1971 Census read:

What is this person's racial origin?

(If of mixed origin indicate the one to which he considers himself to belong)

(Tick one box only or give one origin only)

- ☐ European origin
- ☐ Aboriginal origin
- ☐ Torres Strait Islander origin
- ☐ Other origin (give one only).....

At present no statistics are available on the Aboriginal population enumerated at the 1971 Census.

## Projections of the population

This section contains summary results of a series of projections of the population of Australia, and the States and Territories.

Projections are sometimes distinguished from forecasts on the basis that the former are extrapolations of existing populations assuming the continuance of past trends of births, deaths, and migration. Forecasts may also take into account expectations of trends in other factors such as employment opportunities, government policy or technological advance. Neither projections nor forecasts should be expected to accord consistently with actual future events. Projections are useful for the study of the demographic forces at work and of their likely consequences. Forecasts, often developed from projections, are required for the planning of government services, industrial and economic policy, and many other purposes.

The method chosen for these projections is similar to the method used for the current estimates of the population except that hypothetical figures of births, deaths and net migration are used instead of recorded births, deaths and net migration. Projections are made of the population in a *base year*, classified by age and sex, by the application of age-specific fertility and mortality rates one year at a time. Separate projections of the population resulting from assumed future annual net migration are made in a similar fashion. To obtain the projected total population the two parts are added together. The method used facilitates adjustment of the projections to any postulated level of future migration by application of a pro-rata factor to the migration component. For details of actual net migration recorded for Australia for each year from 1941, see the Statistical Summary of this Year Book.

The assumptions employed in the latest set of projections, and summaries of the results, are given below. They cover the years 1972 to 2000, taking 1970 as the base year.

*Fertility.* For the projections of base year populations, the age-specific birth rates and the masculinity of births recorded in *each State and Territory* in 1970 were used for all future years. Additional female population resulting from future migration was assumed to experience the age-specific birth rates and masculinity of births recorded in 1970 for *Australia as a whole*. The projected births for Australia are the sum of the projected births for each State and Territory.

*Mortality.* It was assumed that the average age-specific mortality rates recorded in *each State, Territory and Australia* in the three years 1965 to 1967, related to the 1966 Census population, would remain unchanged. The projected deaths for Australia are the sum of the projected deaths for each State and Territory. Deaths of persons in the migration component are projected on the basis of the *Australian* 1965-67 mortality experience.

*Migration.* The age-sex composition of all future net interstate and/or overseas migration was assumed to be the average age-sex distribution of the net overseas migration (excess of total arrivals over total departures) recorded for Australia as a whole for the five years ended 30 June 1970.

It has been assumed that the future migration component, for a State, Territory or Australia, will be subject for the whole of the projection period, to the same age-specific fertility and mortality rates as experienced by the Australian population as a whole in 1970 (fertility) and 1965-67 (mortality), regardless of the State or Territory to which the people move, or the State, Territory or country whence they came.

Projections of the population resulting from net migration at a rate of 100,000 persons per annum are shown in the last column of the next table. The table also provides projected populations exclusive of future migration. The use of a single set of assumptions regarding fertility, mortality and age-sex composition of the migration component enables pro-rata calculations to be made of the migration components of projected State and Territory populations, as well as for Australia as a whole, to any chosen constant level.

PROJECTION OF THE POPULATION EXCLUDING OVERSEAS OR INTERSTATE MIGRATION AFTER 30 JUNE 1970: STATES, TERRITORIES AND AUSTRALIA; AND EXTRA POPULATION RESULTING FROM NET MIGRATION AT 100,000 PERSONS PER ANNUM, 1972 TO 2000

('000 persons)

30 June—	Population exclusive of overseas or interstate migration after 30 June 1970									Extra population resulting from net migration at 100,000 persons per annum (a)
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
1970(b)	4,513.0	3,440.0	1,789.8	1,157.2	988.9	387.3	78.1	131.4	12,485.6	..
1971(c)	4,589.6	3,496.2	1,823.4	1,172.8	1,027.4	389.9	85.5	143.8	12,728.5	101.3
1972 . . .	4,605.6	3,526.9	1,834.0	1,183.6	1,018.1	397.3	82.8	136.4	12,784.7	205.4
1973 . . .	4,653.4	3,572.1	1,857.3	1,197.5	1,033.3	402.5	84.9	139.3	12,940.3	312.2
1974 . . .	4,702.2	3,618.3	1,881.2	1,212.0	1,048.9	408.0	86.9	142.2	13,099.8	421.8
1975 . . .	4,751.8	3,665.4	1,905.8	1,226.8	1,064.9	413.7	89.1	145.1	13,262.6	543.1
1980 . . .	5,009.9	3,912.7	2,037.5	1,306.3	1,149.9	445.0	100.4	159.2	14,120.8	1,134.7
1985 . . .	5,278.4	4,175.8	2,179.5	1,390.0	1,238.9	479.0	113.4	173.4	15,028.5	1,797.7
1990 . . .	5,544.0	4,446.7	2,325.3	1,471.2	1,327.8	513.1	128.5	188.1	15,944.6	2,522.8
1995 . . .	5,803.5	4,727.5	2,473.6	1,548.7	1,418.0	546.8	146.4	202.9	16,867.3	3,313.0
2000 . . .	6,070.8	5,030.9	2,631.7	1,629.2	1,514.8	582.7	167.1	218.0	17,845.1	4,170.2

(a) The projected net gain from migration for any State or Territory resulting from sustained net migration at any other level may be calculated *pro rata* from the figures in this column. (b) Estimate based on the Census of 30 June 1966 and subsequent births, deaths and migration, adjusted in accordance with preliminary results of the 1971 Census. (c) 1971 Census, preliminary results. These figures include migration during the twelve months ended June 1971.

To indicate the effects on total population if recent migration levels were to continue unchanged, projections of population resulting from migration have been made for the States, Territories and Australia, using as annual intake levels the estimated average net interstate and overseas migration recorded for the five years ended 30 June 1970. These average annual levels are shown in the following table, together with selected projections of the populations of the States, Territories and Australia, *inclusive* of future migration at these levels.

PROJECTION OF THE POPULATION INCLUDING ANNUAL OVERSEAS AND INTERSTATE NET MIGRATION AFTER 30 JUNE 1970 AT AVERAGE 1966-70 LEVELS: STATES, TERRITORIES AND AUSTRALIA 1972 TO 2000

('000 persons)

30 June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Annual net migration(a)	26.6	16.4	9.4	6.2	20.9	-0.8	3.4	6.3	88.3
1970(b)	4,513.0	3,440.0	1,789.8	1,157.2	988.9	387.3	78.1	131.4	12,485.6
1971(c)	4,589.6	3,496.2	1,823.4	1,172.8	1,027.4	389.9	85.5	143.8	12,728.5
1972 . . .	4,660.1	3,560.5	1,853.3	1,196.3	1,060.9	395.6	89.9	149.3	12,965.9
1973 . . .	4,736.3	3,623.1	1,886.6	1,216.9	1,098.4	400.1	95.6	158.9	13,215.9
1974 . . .	4,814.2	3,687.3	1,920.9	1,238.1	1,136.9	404.7	101.4	168.6	13,472.0
1975 . . .	4,893.6	3,752.7	1,956.0	1,259.9	1,176.3	409.5	107.4	178.5	13,734.0
1980 . . .	5,311.2	4,098.3	2,144.2	1,376.5	1,386.5	436.0	139.4	230.2	15,122.2
1985 . . .	5,755.8	4,469.7	2,348.5	1,501.3	1,613.7	464.9	175.2	285.9	16,615.0
1990 . . .	6,213.8	4,859.2	2,562.4	1,627.3	1,853.8	493.2	215.3	345.8	18,171.0
1995 . . .	6,683.2	5,269.3	2,785.0	1,753.8	2,108.7	520.7	260.3	410.1	19,791.1
2000 . . .	7,178.1	5,712.7	3,023.7	1,887.4	2,384.4	549.8	310.4	478.8	21,525.3

(a) Net annual migration gain allocated to each State or Territory at the average annual 1966-70 levels. (b) Estimate based on the Census of June 1966 and subsequent births, deaths and migration, adjusted in accordance with preliminary results of the 1971 Census. (c) 1971 Census, preliminary results.



The following table shows, for Australia, percentage age distributions, masculinity, and percentage increases over 1970, on the assumptions of the projections, and including net migration at the average annual 1966-70 levels.

**PROJECTION INCLUDING MIGRATION AFTER 30 JUNE 1970 AT THE 1966-70  
AVERAGE ANNUAL LEVEL: AUSTRALIA, 1975 TO 2000**

	1970	1975	1980	1985	1990	1995	2000
<b>PERCENTAGE DISTRIBUTION (Persons)</b>							
<b>Ages—</b>							
Under 5 . . .	9.50	10.08	10.43	10.45	10.23	10.03	10.07
5-14 . . .	19.35	18.33	18.02	18.75	19.07	18.92	18.54
15-24 . . .	17.47	17.31	17.07	16.14	15.90	16.55	16.84
25-44 . . .	25.32	26.24	27.55	28.64	29.08	28.16	27.78
45-64 . . .	20.02	19.69	18.42	17.64	17.20	17.91	18.85
65 and over . . .	8.34	8.35	8.51	8.38	8.53	8.42	7.93
<b>Total . . .</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>
<b>Dependent ages—</b>							
Under 15 . . .	28.85	28.41	28.45	29.20	29.29	28.96	28.61
Pensionable ages (a) . . .	10.32	10.48	10.48	10.47	10.42	10.26	9.62
<b>Total, dependent ages</b>	<b>39.17</b>	<b>38.89</b>	<b>38.93</b>	<b>39.67</b>	<b>39.71</b>	<b>39.22</b>	<b>38.23</b>
<b>PERCENTAGE INCREASE OVER 1970 (Persons)</b>							
<b>Ages—</b>							
Under 5 . . .	..	16.75	32.97	46.40	56.72	67.46	82.71
5-14 . . .	..	4.19	12.81	28.93	43.41	55.02	65.15
15-24 . . .	..	8.33	18.35	22.96	32.46	50.19	66.12
25-44 . . .	..	13.99	31.78	50.51	67.17	76.33	89.10
45-64 . . .	..	8.22	11.43	17.27	25.02	41.80	62.29
65 and over . . .	..	10.10	23.56	33.71	48.69	59.91	63.89
<b>Total . . .</b>	<b>..</b>	<b>10.00</b>	<b>21.12</b>	<b>33.08</b>	<b>45.54</b>	<b>58.51</b>	<b>72.37</b>
<b>Dependent ages—</b>							
Under 15 . . .	..	8.33	19.45	34.68	47.79	59.12	70.93
Pensionable ages(a) . . .	..	11.73	23.04	35.01	47.05	57.67	60.74
<b>Total, dependent ages</b>	<b>..</b>	<b>9.22</b>	<b>20.39</b>	<b>34.77</b>	<b>47.60</b>	<b>58.73</b>	<b>68.25</b>
<b>MASCULINITY(b)</b>							
Under 15 . . .	104.89	104.70	104.52	104.41	104.41	104.42	104.57
15-44 . . .	106.45	106.36	106.36	106.32	106.01	105.65	105.47
45-64 . . .	100.37	100.20	100.66	101.34	102.33	102.72	102.43
65 and over . . .	71.13	72.34	72.28	71.01	70.79	71.13	70.65
<b>Total . . .</b>	<b>101.32</b>	<b>101.35</b>	<b>101.40</b>	<b>101.40</b>	<b>101.38</b>	<b>101.36</b>	<b>101.39</b>

(a) Males 65 and over, females 60 and over.

(b) Number of males per 100 females.

### Population of External Territories

Ordinances of the individual External Territories under the control of Australia provide for a census of the population to be taken on the day prescribed for the taking of a census in the Commonwealth of Australia. The following table shows the population of the Territories of Christmas Island, Cocos (Keeling) Islands, Norfolk Island, Papua and the Trust Territory of New Guinea at the census of 30 June 1966 and as estimated at 30 June 1970.

POPULATION: EXTERNAL TERRITORIES, 30 JUNE 1966 AND 1970

Territory	Census 30 June 1966			Estimate 30 June 1970
	Males	Females	Persons	Persons
Christmas Island . . .	2,158	1,233	3,391	3,361
Cocos (Keeling) Islands . . .	375	309	684	611
Norfolk Island . . .	563	584	1,147	1,240
Papua—				
Indigenous population . . .	(a)310,153	(a)281,806	(a)591,959	668,964
Non-indigenous population	8,307	6,070	14,377	n.a.
<i>Total, Papua . . .</i>	<i>318,460</i>	<i>287,876</i>	<i>606,336</i>	<i>(b)n.a.</i>
Trust Territory of New Guinea—				
Indigenous population . . .	(a)810,153	(a)748,205	(a)1,558,358	1,772,744
Non-indigenous population	11,744	8,547	20,291	n.a.
<i>Total, New Guinea . . .</i>	<i>821,898</i>	<i>756,756</i>	<i>1,578,654</i>	<i>(b)n.a.</i>

(a) The 1966 Census of Papua New Guinea was the first to include the indigenous population, and was based upon a 10 per cent sample of rural villages in the two Territories. (b) The total population for Papua New Guinea was 2,490,668 at 30 June 1970.

Further particulars concerning the indigenous populations of the Territories are given in the chapter The Territories of Australia.

### International statistics of population

In the following tables the population, density, rate of growth, natural increase and masculinity are shown in respect of all countries which had an estimated population of at least ten million persons in 1970, excepting for the group 'Oceania', which is treated in more detail. The source of these figures for all countries except Australia is the 1970 *Demographic Yearbook*, which is prepared and published by the Statistical Office of the United Nations. The tables include figures varying in reliability and accuracy, there being considerable variation in the quality of demographic statistics between countries, but this information has been shown to provide a guide as to the magnitude and trend of population movements in overseas countries.

Where the information available to the Statistical Office of the United Nations relates to only part of the population of a country, the population characteristic (e.g. rate of growth), or vital statistics rate (e.g. marriages), has been omitted from the tables, and this is indicated by a footnote.

For fuller particulars of the differences in the quality of the statistics and their reliability and for other qualifications, reference should be made to the detailed explanations contained in the *Demographic Yearbook* of the Statistical Office of the United Nations (see particularly Technical Notes on Statistical Tables and footnotes to the tables).

### Population, rate of growth and density: world, continents and regions

In preparing the population figures shown below the Population Branch of the United Nations includes revisions made to the estimates from time to time as new data become available, for example, from a census. Adjustments for under-enumeration have also been made. Reference should be made to the description contained in the United Nations *Demographic Yearbook*, 1970 (pages 22-23), regarding the scheme of regionalisation.

### POPULATION, DENSITY AND RATE OF INCREASE FOR THE WORLD AND CONTINENTS—SELECTED YEARS

(Source: United Nations *Demographic Yearbook*, 1970)

Continent and region	Population						Annual rate of increase 1963-70 (per cent)	Average annual increase 1963-70 (millions)	Density (persons per square mile) 1970
	Estimates of mid-year population (millions)								
	1930	1940	1950	1960	1963	1970			
World total	2,070	2,295	2,486	2,982	3,162	3,632	2.0	67.1	70
Africa	164	191	217	270	289	344	2.5	7.9	28
Western Africa	48	58	64	80	85	101	2.5	2.3	41
Eastern Africa	46	54	62	77	82	98	2.5	2.3	39
Northern Africa	39	44	51	65	71	87	3.0	2.3	26
Middle Africa	21	23	25	29	31	36	2.1	0.7	13
Southern Africa	10	12	14	18	19	23	2.3	0.6	21
America	242	274	328	412	441	511	2.1	10.0	31
Northern America	134	144	166	199	208	228	1.3	2.9	28
Latin America	108	130	162	213	232	283	2.9	7.3	36
Tropical South America	55	67	84	112	122	151	3.0	4.1	28
Middle America	22	27	35	48	53	67	3.4	2.0	70
Temperate South America	19	22	27	33	35	39	1.8	0.6	26
Caribbean	12	14	17	21	22	26	2.3	0.6	282
Asia(a)	1,120	1,244	1,355	1,645	1,754	2,056	2.3	43.1	194
East Asia	591	634	657	780	822	930	1.8	15.4	205
Mainland Region	501	533	536	640	675	765	1.8	12.9	179
Japan	64	71	83	93	96	103	1.1	1.0	725
Other East Asia	26	30	38	47	51	61	2.6	1.4	614
South Asia	529	610	698	865	931	1,126	2.7	27.9	184
Middle South Asia	371	422	481	588	632	762	2.7	18.6	293
South East Asia	127	150	173	219	236	287	2.8	7.3	166
South West Asia	31	38	44	58	63	77	2.9	2.0	44
Europe(a)	355	380	392	425	437	462	0.8	3.6	243
Western Europe	108	113	122	135	140	149	0.9	1.3	386
Southern Europe	93	103	109	118	120	128	0.9	1.1	254
Eastern Europe	89	96	89	97	99	104	0.8	0.7	272
Northern Europe	65	68	72	76	78	81	0.6	0.4	127
Oceania	10.0	11.1	12.6	15.8	16.8	19.4	2.1	0.4	5
Australia and New Zealand	8.0	8.7	10.1	12.7	13.5	15.4	1.9	0.3	5
Melanesia	1.6	1.8	1.8	2.2	2.3	2.8	2.4	0.1	13
Polynesia and Micronesia	0.4	0.6	0.7	0.9	1.0	1.2	3.2	0.0	106
Union of Soviet Socialist Republics	179	195	180	214	225	243	1.1	2.6	28

(a) Excludes U.S.S.R. shown below.

### Population, density, rate of growth, natural increase, and masculinity of selected countries

Certain details of the population of the more populous countries within continental groups are shown in the following table. As explained above, reference should be made to the detailed comments contained in the United Nations *Demographic Yearbook*, 1970, regarding geographical units used, boundaries of areas, reliability of estimates, etc.



POPULATION, DENSITY, RATE OF INCREASE, NATURAL INCREASE AND  
MASCULINITY—SELECTED COUNTRIES(Source: United Nations *Demographic Yearbook*, 1970)

Country	Population mid-year 1970 (thousands)	Density (persons per square mile)	Annual rate of increase 1963-70 (per cent)	Natural increase		Masculinity at latest census	
				Year	Rate (per thousand popula- tion)	Year	Rate (number of males per 100 females)
Africa—							
Nigeria . . . . .	55,074	155	2.5	1965-70	24.7	1963	102.0
United Arab Republic, Egypt . . . . .	33,329	85	2.5	1965-70	27.6	1966	101.8
Ethiopia . . . . .	25,046	52	1.9	1965-70	20.6	..	(a)
South Africa . . . . .	20,113	41	2.4	1965-70	23.7	1960	101.1
Congo, Democratic Republic of . . . . .	17,423	18	2.2	1965-70	21.7	1958	94.4
Sudan . . . . .	15,605	16	2.8	1965-70	30.5	1956	102.2
Morocco . . . . .	15,525	91	3.0	1965-70	33.0	1960	99.9
Algeria . . . . .	14,012	16	3.2	1965-70	32.2	1966	100.8
Tanzania—							
Tanganyika . . . . .	12,896	36	2.6	1957	21-22	1967	95.0
Zanzibar . . . . .	377	396	2.0	1970	26	1967	102.4
Kenya . . . . .	10,898	49	3.0	1965-70	30.3	1962	98.1
North America—							
United States of America . . . . .	205,395	57	1.2	1970	8.8	1970	94.8
Mexico . . . . .	50,670	67	3.5	1970	32.1	1970	99.6
Canada . . . . .	21,406	5	1.7	1969	10.2	1966	100.9
South America—							
Brazil . . . . .	95,305	28	3.2	1965-70	28.3	1960	99.7
Argentina . . . . .	24,352	23	1.5	1967	12.3	1970	101.4
Colombia . . . . .	21,117	49	3.2	1965-70	34.0	1964	97.1
Peru . . . . .	13,586	28	3.1	1965-70	30.7	1961	98.9
Venezuela . . . . .	10,399	28	3.6	1965-70	33.1	1961	103.3
Asia—							
China (mainland) . . . . .	759,619	205	1.8	1965-70	17.8	1953	107.6
India . . . . .	550,376	435	2.5	1965-70	26.1	1971	107.2
Indonesia . . . . .	121,198	210	2.8	1965-70	28.9	1961	97.3
Pakistan . . . . .	114,189	313	2.1	1965-70	32.5	1961	111.1
Japan . . . . .	103,540	725	1.1	1970	12.0	1970	96.5
Philippines . . . . .	38,493	331	3.5	1965-70	32.7	1960	101.8
Thailand . . . . .	35,814	181	3.1	1965-70	32.4	1960	100.4
Turkey in Asia . . . . .	32,251	111	2.5	1967	25.0	..	(a)
Korea, Republic of . . . . .	31,793	837	2.4	1965-70	24.6	1966	101.3
Iran . . . . .	28,662	44	2.9	1965-70	28.8	1966	107.3
Burma . . . . .	27,584	106	2.2	1965-70	22.9	1941	104.0
Vietnam (North) . . . . .	21,154	344	2.4	1965-70	21.4	1960	93.4
Vietnam, Republic of . . . . .	18,332	272	2.6	1965-70	21.4	..	(a)
Afghanistan . . . . .	17,125	67	2.4	1965-70	24.0	..	(a)
China, Republic of (Taiwan) . . . . .	14,035	1,010	2.6	1970	23.0	1966	109.4
Korea (North) . . . . .	13,892	298	2.8	1965-70	27.6	..	(a)
Ceylon . . . . .	12,514	495	2.3	1968	24.1	1963	108.2
Nepal . . . . .	10,845	199	1.8	1965-70	21.7	1961	97.0
Europe—							
Germany—							
Federal Republic of . . . . .	59,554	622	1.0	1970	1.7	1961	89.4
Eastern . . . . .	16,183	389	0.1	1970	-0.2	1964	84.1
West Berlin . . . . .	2,128	11,456	-0.3	1970	-9.5	1961	73.2
East Berlin . . . . .	1,074	6,902	0.2	1968	-1.9	1964	77.8
United Kingdom . . . . .	55,711	591	0.5	1970	4.4	1961	93.6
Italy . . . . .	53,667	461	0.8	1970	7.1	1961	94.0
France . . . . .	50,775	241	0.9	1970	6.1	1962	94.6
Spain . . . . .	33,290	171	1.0	1970	11.2	1960	94.2
Poland . . . . .	32,805	272	1.0	1970	8.6	1960	93.7
Yugoslavia . . . . .	20,527	207	1.1	1970	8.7	1961	95.1
Romania . . . . .	20,253	220	1.1	1970	11.5	1966	95.9
Czechoslovakia . . . . .	14,467	293	0.5	1970	4.4	1961	95.2
Netherlands . . . . .	13,019	826	1.2	1970	10.0	1960	99.2
Hungary . . . . .	10,331	287	0.3	1970	3.1	1960	93.2
Oceania—							
Australia . . . . .	12,486	5	1.9	1970	11.5	1966	101.4
New Zealand . . . . .	2,816	26	1.5	1970	13.3	1966	100.8
New Guinea (Trust Territory) . . . . .	1,752	18	2.1	..	(a)	1966	108.6
Papua . . . . .	669	8	3.0	..	(a)	1966	110.6
U.S.S.R.—							
Union of Soviet Socialist Republics . . . . .	242,768	28	1.1	1970	9.3	1970	85.4

(a) Not available or information relates to a segment of a population only.

Overseas arrivals and departures

This section contains summary statistics of total overseas arrivals and departures and detailed statistics of permanent movement. For information on passengers in other categories, *see* Chapter 12, Transport, Communication and Travel.

More detailed statistics of overseas arrivals and departures, covering country of residence, country of embarkation or disembarkation, mode of travel, month of arrival or departure, etc., are shown in the tables of Section II, Overseas Arrivals and Departures, of the annual bulletin *Demography*. Mimeographed bulletins, containing the latest available statistics of overseas arrivals and departures, are issued monthly and quarterly.

Overseas arrivals and departures since 1941

Earlier issues of the Year Book contain tables showing the increase of population by net migration from 1861 to the latest date, while information for individual years from 1901 is published in the annual bulletin *Demography* (*see also* Statistical Summary of this Year Book). Australian statistics of overseas arrivals and departures exclude aircraft and ships' crews, persons passing through Australia on board the same ship or flight, and persons on short pleasure cruises in the south-west Pacific commencing and finishing in Australia on ships not then engaged in regular voyages. The following table shows arrivals and departures since 1941, and refers to total movement irrespective of length of stay.

OVERSEAS ARRIVALS AND DEPARTURES, BY SEX: AUSTRALIA, 1941 TO 1971

Period	Total arrivals			Total departures			Excess of arrivals over departures		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
1941-45(a)	35,422	28,503	63,925	30,097	26,019	56,116	5,325	2,484	7,809
1946-50(a)	398,507	303,413	701,920	180,779	168,057	348,836	217,728	135,356	353,084
1951-55	581,300	446,566	1,027,866	340,819	273,223	614,042	240,481	173,343	413,824
1956-60	695,445	568,652	1,264,097	481,235	377,840	859,075	214,210	190,812	405,022
1961-65	1,107,419	896,215	2,003,634	906,956	696,790	1,603,746	200,463	199,425	399,888
1966-70	2,299,254	1,592,832	3,892,086	2,007,981	1,340,297	3,348,278	291,273	252,535	543,808
1967	361,345	275,825	637,170	311,727	233,534	545,261	49,618	42,291	91,909
1968	465,232	306,560	771,792	403,748	254,991	658,739	61,484	51,569	113,053
1969	545,559	353,299	898,858	475,840	293,972	769,812	69,719	59,327	129,046
1970	613,899	412,776	1,026,675	548,353	355,448	903,801	65,546	57,328	122,874
1971	625,066	453,732	1,078,798	581,510	412,683	994,193	43,556	41,049	84,605

(a) Excludes movements of defence personnel from September 1939 to June 1947.

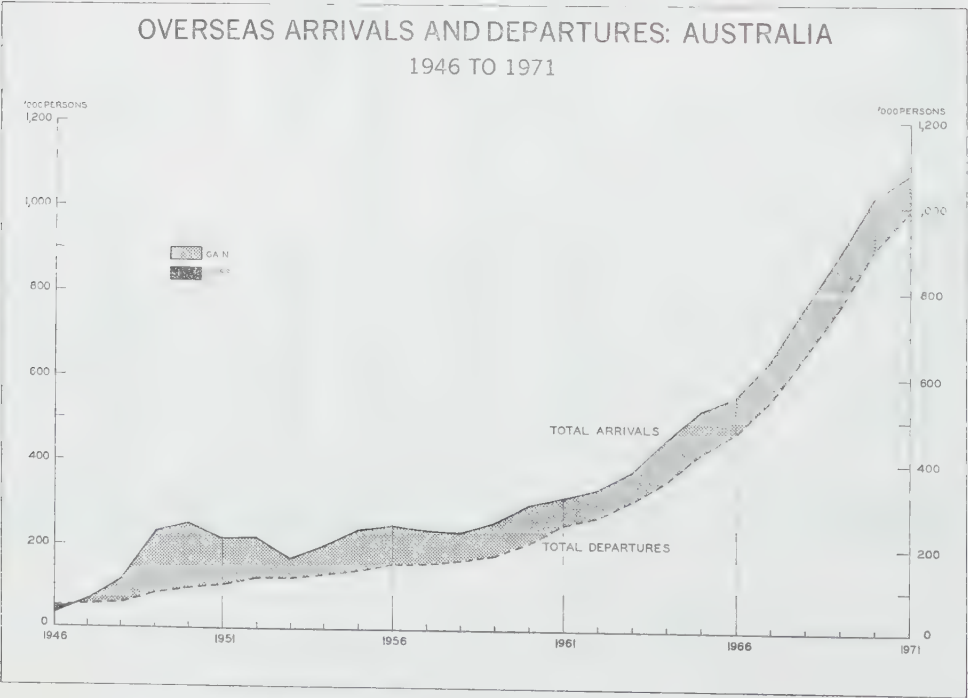


PLATE 18

**Excess of arrivals over departures**

The excess of total overseas arrivals over departures is one of the elements of population increase taken into account in preparing the estimated population for other than census dates (*see* pages 123 and 129 of this chapter). It is necessary to use statistics of total overseas arrivals and departures for this purpose, because Australian population statistics relate to the total population present in Australia at the date of the census or estimate, and not the population normally resident in Australia (which would include those temporarily overseas and exclude those temporarily visiting Australia).

**EXCESS OF ARRIVALS OVER DEPARTURES, BY SEX: AGE AND MARITAL STATUS  
AUSTRALIA, 1970 AND 1971**

<i>Age and marital status</i>	1970			1971		
	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
<b>AGE</b>						
Age last birthday on arrival or departure—						
0-4 . . .	7,688	6,950	14,638	4,507	4,154	8,661
5-14 . . .	13,915	12,582	26,497	9,548	8,447	17,995
15-24 . . .	18,795	12,675	31,470	14,571	10,021	24,592
25-44 . . .	21,260	19,070	40,330	12,638	13,319	25,957
45-64 . . .	2,741	4,396	7,137	1,575	4,419	5,994
65 and over . . .	1,147	1,655	2,802	717	689	1,406
<b>Total . . .</b>	<b>65,546</b>	<b>57,328</b>	<b>122,874</b>	<b>43,556</b>	<b>41,049</b>	<b>84,605</b>
<b>MARITAL STATUS</b>						
Never married—						
Under 15 years of age	21,603	19,532	41,135	14,055	12,601	26,656
15 years of age and over . . .	18,121	8,388	26,509	11,979	7,134	19,113
Married . . .	24,640	26,557	51,197	16,270	20,052	36,322
Widowed . . .	470	2,022	2,492	315	601	916
Divorced . . .	712	829	1,541	937	661	1,598
<b>Total . . .</b>	<b>65,546</b>	<b>57,328</b>	<b>122,874</b>	<b>43,556</b>	<b>41,049</b>	<b>84,605</b>

**Classification of travellers**

Since 1 July 1924 overseas travellers have been classified into two principal categories, distinguishing movements for short terms from movements for longer periods (including permanently). Before 1957 these categories were classified as *temporary* and *permanent*. Thereafter the categories were entitled *short-term* and *permanent* and *long-term*, but the basis of classification was not changed and the figures are directly comparable for the whole period. For short-term travel, overseas visitors and Australian residents are identified separately.

Revised questions for travellers were introduced in mid-1958, and these enabled the separation, from 1 January 1959, of permanent from other long-term movements and also the identification among the permanent departures of former settlers departing.



The principal categories of overseas movement are as follows:

*Permanent*—consists of persons arriving with the stated intention of settling permanently in Australia (settlers), and Australian residents departing with the stated intention of residing permanently abroad; the latter include *former settlers*, i.e. persons who, on departure from Australia, stated that they had come to Australia to settle, had stayed for a period of twelve months or more and were now departing permanently.

*Long-term*—consists of the arrival of overseas visitors and the departure of Australian residents with the stated intention of staying (in Australia or in a country abroad respectively) for twelve months or more; and the departure of visitors and the return of residents who have stayed (in Australia or in a country abroad respectively) for twelve months or more.

*Short-term*—consists of all other movements, including the movement of Australian troops irrespective of period of stay, and U.S. troops visiting Australia on rest and recreation leave.

This classification is based on statements made by the traveller on arrival in, or departure from, Australia. They represent the traveller's intention at that time. Many travellers subsequently change their intentions, and this must be borne in mind in interpreting the statistics.

The numbers so classified since 1 January 1946 are as follows:

### OVERSEAS ARRIVALS AND DEPARTURES: CLASSIFICATION OF TRAVELLERS AUSTRALIA, 1946 TO 1971

#### ARRIVALS

Period	Permanent and long-term movement				Short-term movement				
	Per- manent  Settlers arriving	Long-term  Australian residents returning	Overseas visitors arriving	Total permanent and long-term arrivals	Australian residents returning	Overseas visitors arriving			Total arrivals
						In transit	Other	Total	
1946-50	n.a.	n.a.	n.a.	457,988	108,736	n.a.	n.a.	135,196	701,920
1951-55	n.a.	n.a.	n.a.	570,090	216,949	77,825	163,002	240,827	1,027,866
1956-60	n.a.	n.a.	n.a.	615,767	309,611	84,206	254,513	338,719	1,264,097
1961-65	575,992	111,288	73,848	761,128	585,203	143,424	513,879	657,303	2,003,634
1966-70	804,063	180,741	122,405	1,107,209	1,298,500	207,379	1,278,998	1,486,377	3,892,086
1967	135,019	35,655	21,637	192,311	223,038	36,299	185,522	221,821	637,170
1968	159,270	36,387	23,473	219,130	252,773	37,672	262,217	299,889	771,792
1969	183,416	38,308	26,867	248,591	288,990	42,485	318,792	361,277	898,588
1970	185,325	42,099	31,194	258,618	351,929	58,330	357,798	416,128	1,026,675
1971	155,525	47,782	30,500	233,807	412,598	64,727	367,666	432,393	1,078,798

#### DEPARTURES

Period	Permanent and long-term movement						Short-term movement			
	Permanent			Long-term		Total per- manent and long-term depart- ures	Australian residents departing	Overseas visitors departing	Total depart- ures	
	Former settlers departing	Other residents departing	Total per- manent depart- ures	Australian residents departing	Overseas visitors departing					
1946-50	n.a.	n.a.	n.a.	n.a.	n.a.	105,968	101,787	141,081	348,836	
1951-55	n.a.	n.a.	n.a.	n.a.	n.a.	155,509	212,978	245,555	614,042	
1956-60	n.a.	n.a.	n.a.	n.a.	n.a.	210,807	306,118	342,150	859,075	
1961-65	48,491	33,989	82,480	189,526	63,593	335,599	593,119	675,028	1,603,746	
1966-70	115,954	43,758	159,712	281,097	71,746	512,555	1,294,118	1,541,605	3,348,278	
1967	22,302	8,502	30,804	52,148	12,801	95,753	217,746	231,762	545,261	
1968	23,814	7,861	31,675	51,386	12,617	95,678	251,880	311,181	658,739	
1969	24,739	8,892	33,631	59,027	15,602	108,260	288,805	372,747	769,812	
1970	26,756	10,538	37,294	64,215	18,727	120,236	352,526	431,039	903,801	
1971	29,449	11,673	41,122	67,699	21,433	130,254	413,917	450,022	994,199	

#### Permanent movement

In the following paragraphs particulars are given of the *persons who on arrival in Australia stated that they came intending to settle*, and of *Australian residents who on their departure from Australia stated their intention of residing permanently abroad*, classified according to nationality, occupation, age, marital status, and State or Territory of intended residence (arrivals) or of last residence (departures).

## Nationality

**OVERSEAS ARRIVALS AND DEPARTURES—PERMANENT MOVEMENT  
NATIONALITY, AUSTRALIA, 1970 AND 1971**  
(Persons)

Nationality	1970				1971			
	Arrivals			Departures	Arrivals			Departures
	Assisted (a)	Other	Total		Assisted (a)	Other	Total	
<b>British—</b>								
Country of citizenship—								
Australia . . . . .	750	1,335	2,085	10,492	672	1,925	2,597	11,316
Canada . . . . .	98	1,445	1,543	410	151	2,273	2,424	423
Ceylon, India, Pakistan . . . . .	17	4,009	4,026	50	2	3,872	3,874	57
Ireland(b) . . . . .	2,246	182	2,428	427	1,970	257	2,227	474
Malta . . . . .	871	189	1,060	498	1,123	281	1,404	389
New Zealand . . . . .	74	4,758	4,832	2,200	55	4,410	4,465	2,442
South Africa(b) . . . . .	545	639	1,184	102	586	780	1,366	135
United Kingdom and Colonies . . . . .	65,275	7,934	73,209	14,684	48,628	8,747	57,375	16,751
Other countries . . . . .	79	1,905	1,984	193	88	2,289	2,377	226
Citizenship not stated . . . . .	4,132	1,855	5,987	1,532	2,014	1,702	3,716	1,229
<b>Total, British . . . . .</b>	<b>74,087</b>	<b>24,251</b>	<b>98,338</b>	<b>30,588</b>	<b>55,289</b>	<b>26,536</b>	<b>81,825</b>	<b>33,442</b>
<b>American (U.S.) . . . . .</b>	<b>2,593</b>	<b>1,972</b>	<b>4,565</b>	<b>1,191</b>	<b>3,613</b>	<b>2,978</b>	<b>6,591</b>	<b>1,046</b>
Austrian . . . . .	603	89	692	174	473	109	582	167
Dutch . . . . .	2,067	437	2,504	1,058	1,705	435	2,140	1,097
French . . . . .	2,055	156	2,211	192	1,995	199	2,194	381
German . . . . .	2,929	418	3,347	856	2,398	470	2,868	979
Greek . . . . .	6,364	4,004	10,368	471	5,662	3,145	8,807	419
Italian . . . . .	6,572	2,735	9,307	723	4,604	2,011	6,615	860
Lebanese . . . . .	22	3,885	3,907	20	17	3,781	3,798	45
Portuguese . . . . .	950	449	1,399	23	1,139	576	1,715	24
Spanish . . . . .	1,550	291	1,841	113	1,724	271	1,995	132
Swiss . . . . .	895	175	1,070	282	990	187	1,177	401
Turkish . . . . .	4,280	150	4,430	20	2,780	486	3,266	16
Yugoslav . . . . .	21,942	7,141	29,083	357	14,267	4,121	18,388	526
Other, including stateless . . . . .	7,519	4,744	12,263	1,226	7,155	6,409	13,564	1,587
<b>Grand total . . . . .</b>	<b>134,428</b>	<b>50,897</b>	<b>185,325</b>	<b>37,294</b>	<b>103,811</b>	<b>51,714</b>	<b>155,525</b>	<b>41,122</b>

(a) For details of assisted passage schemes see pages 153–5. of this table.

(b) Included with 'British nationality' for the purpose

## Occupation

**OVERSEAS ARRIVALS AND DEPARTURES—PERMANENT MOVEMENT  
OCCUPATION AND SEX, AUSTRALIA, 1970 AND 1971**

Occupation group	1970				1971			
	Arrivals		Departures		Arrivals		Departures	
	Males	Females	Males	Females	Males	Females	Males	Females
<b>Professional, technical, and related workers . . . . .</b>	<b>6,761</b>	<b>3,839</b>	<b>2,001</b>	<b>1,391</b>	<b>6,920</b>	<b>3,678</b>	<b>2,230</b>	<b>1,448</b>
Administrative, executive, and managerial workers . . . . .	3,157	379	1,004	100	2,785	328	1,104	133
Clerical workers . . . . .	2,617	6,556	820	2,239	2,353	5,358	888	2,444
Sales workers . . . . .	2,269	1,086	639	318	2,020	902	626	385
Farmers, fishermen, hunters, timber getters, and related workers . . . . .	1,730	32	299	14	1,327	49	327	10
Miners, quarrymen, and related workers . . . . .	323	..	121	..	191	..	134	..
Workers in transport and communication . . . . .	3,541	525	680	133	2,640	361	759	162
Craftsmen and production-process workers . . . . .	26,065	3,063	4,842	580	20,520	2,506	5,296	556
Labourers(a) . . . . .	11,602	..	1,254	..	7,143	..	1,456	..
Service (protective and other), sport, and recreation workers . . . . .	2,349	4,786	553	522	2,018	4,114	555	593
Occupation inadequately described or not stated . . . . .	3,738	598	378	67	4,172	679	500	95
<b>Persons not in work force—</b>								
Children and students . . . . .	33,149	30,823	6,062	5,763	28,032	25,880	6,866	6,389
Others . . . . .	1,418	34,919	508	7,006	1,411	30,138	586	7,580
<b>Total . . . . .</b>	<b>98,719</b>	<b>86,606</b>	<b>19,161</b>	<b>18,133</b>	<b>81,532</b>	<b>73,993</b>	<b>21,327</b>	<b>19,795</b>

(a) Labourers (so described), not elsewhere classified and freight handlers, including waterside workers.

*Age and marital status*OVERSEAS ARRIVALS AND DEPARTURES—PERMANENT MOVEMENT, BY SEX  
AGE DISTRIBUTION, AND MARITAL STATUS, AUSTRALIA, 1971

<i>Age last birthday on arrival or departure</i>	<i>Arrivals</i>				<i>Departures</i>			
	<i>Never married</i>	<i>Married</i>	<i>Widowed or divorced</i>	<i>Total</i>	<i>Never married</i>	<i>Married</i>	<i>Widowed or divorced</i>	<i>Total</i>
MALES								
0-4 . . .	10,053	..	..	10,053	2,605	..	..	2,605
5-14 . . .	14,961	..	..	14,961	3,592	..	..	3,592
15-24 . . .	15,777	4,540	45	20,362	2,940	912	6	3,858
25-44 . . .	7,027	21,978	577	29,582	2,336	6,096	131	8,563
45-64 . . .	363	4,738	280	5,381	178	1,825	115	2,118
65 and over . . .	64	878	251	1,193	35	405	151	59
<i>Total</i> . . .	<i>48,245</i>	<i>32,134</i>	<i>1,153</i>	<i>81,532</i>	<i>11,686</i>	<i>9,238</i>	<i>403</i>	<i>21,327</i>
FEMALES								
0-4 . . .	9,605	..	..	9,605	2,436	..	..	2,436
5-14 . . .	13,841	..	..	13,841	3,473	..	..	3,473
15-24 . . .	9,665	9,237	76	18,978	2,017	1,984	36	4,037
25-44 . . .	3,094	20,053	604	23,751	968	5,696	202	6,866
45-64 . . .	333	4,272	1,432	6,037	108	1,600	446	2,154
65 and over . . .	83	610	1,088	1,781	42	255	532	829
<i>Total</i> . . .	<i>36,621</i>	<i>34,172</i>	<i>3,200</i>	<i>73,993</i>	<i>9,044</i>	<i>9,535</i>	<i>1,216</i>	<i>19,795</i>
PERSONS								
0-4 . . .	19,658	..	..	19,658	5,041	..	..	5,041
5-14 . . .	28,802	..	..	28,802	7,065	..	..	7,065
15-24 . . .	25,442	13,777	121	39,340	4,957	2,896	42	7,895
25-44 . . .	10,121	42,031	1,181	53,333	3,304	11,792	333	15,429
45-64 . . .	696	9,010	1,712	11,418	286	3,425	561	4,272
65 and over . . .	147	1,488	1,339	2,974	77	660	683	1,420
<i>Total</i> . . .	<i>84,866</i>	<i>66,306</i>	<i>4,353</i>	<i>155,525</i>	<i>20,730</i>	<i>18,773</i>	<i>1,619</i>	<i>41,122</i>

*State or Territory of intended residence (arrivals) or last residence (departures).* The following table shows the number of settlers arriving in Australia by State or Territory of intended residence and the number of Australian residents departing permanently by State or Territory of last residence, for the years 1969 to 1971. Settlers are asked, on or before arrival, the State or Territory of Australia in which they next intend to stay for twelve months or more. The statements represent the settlers' intentions at the time and these may not be realised. The allocation to States and Territories in the table is based on these statements, except that settlers proceeding to the migrant reception centre, Bonegilla, Victoria, were allocated, as far as was practicable, to the State or Territory of their placement from the centre. Residents departing permanently are asked the State or Territory in which they last stayed for twelve months or more.

OVERSEAS ARRIVALS AND DEPARTURES—PERMANENT MOVEMENT  
SETTLERS ARRIVING AND RESIDENTS DEPARTING, BY STATE OR TERRITORY OF  
INTENDED RESIDENCE (ARRIVALS) OR LAST RESIDENCE (DEPARTURES), 1969 TO 1971  
(Persons)

<i>State or Territory of intended residence (arrivals) or last residence (departures)</i>	<i>Settlers arriving</i>			<i>Residents departing</i>		
	<i>1969</i>	<i>1970</i>	<i>1971</i>	<i>1969</i>	<i>1970</i>	<i>1971</i>
New South Wales . . . . .	70,147	72,563	60,530	10,551	12,379	13,914
Victoria . . . . .	50,063	49,013	41,917	7,487	8,026	8,687
Queensland . . . . .	12,188	11,467	10,397	3,190	3,554	3,756
South Australia . . . . .	16,589	17,256	13,348	3,703	3,583	3,625
Western Australia . . . . .	22,897	23,082	19,743	4,100	4,251	5,047
Tasmania . . . . .	2,036	1,979	1,323	609	613	636
Northern Territory . . . . .	384	521	607	195	265	346
Australian Capital Territory . . . . .	1,388	1,542	1,296	490	517	495
Not stated(a) . . . . .	7,724	7,902	6,364	3,306	4,106	4,616
<i>Total</i> . . . . .	<i>183,416</i>	<i>185,325</i>	<i>155,525</i>	<i>33,631</i>	<i>37,294</i>	<i>41,122</i>

(a) Includes settlers passing through the migrant reception centre who were not placed in time for allocation to States.



*Former settlers and other residents departing permanently—country of intended residence.* The principal countries of intended residence of persons departing permanently during the years 1970 and 1971 are shown in the following table for 'former settlers' departing permanently (*see* definition on page 150) and other residents departing permanently.

OVERSEAS DEPARTURES—PERMANENT MOVEMENT  
COUNTRY OF INTENDED RESIDENCE(a)  
AUSTRALIA, 1970 AND 1971

Country of intended residence(a)	1970			1971		
	Former settlers	Other residents	Total	Former settlers	Other residents	Total
Canada . . . . .	898	808	1,706	731	617	1,348
New Zealand . . . . .	3,418	2,546	5,964	3,599	2,811	6,410
Papua New Guinea . . . . .	311	1,653	1,964	271	1,798	2,069
United Kingdom and Ireland . . . . .	14,310	2,086	16,396	16,002	2,397	18,399
Other Commonwealth countries . . . . .	948	800	1,748	955	933	1,888
<i>Total, Commonwealth countries</i>	<i>19,885</i>	<i>7,893</i>	<i>27,778</i>	<i>21,558</i>	<i>8,556</i>	<i>30,114</i>
Germany . . . . .	872	214	1,086	977	261	1,238
Italy . . . . .	701	182	883	802	260	1,062
Netherlands . . . . .	950	283	1,233	1,009	373	1,382
Other European countries . . . . .	2,017	458	2,475	2,834	625	3,459
United States of America . . . . .	1,455	992	2,447	1,176	950	2,126
Other countries . . . . .	876	516	1,392	1,093	648	1,741
<i>Total, foreign countries</i>	<i>6,871</i>	<i>2,645</i>	<i>9,516</i>	<i>7,891</i>	<i>3,117</i>	<i>11,008</i>
<b>Grand total . . . . .</b>	<b>26,756</b>	<b>10,538</b>	<b>37,294</b>	<b>29,449</b>	<b>11,673</b>	<b>41,122</b>

(a) For a period of twelve months or more.

Assisted migration into Australia

Detailed statistics of assisted migration into Australia are shown in *Australian Immigration: Consolidated Statistics* and *Australian Immigration: Quarterly Statistical Summary* published by the Department of Immigration.

Immigration has been a major factor in Australia's economic growth. Since the 1939–45 War immigration programmes have been pursued as a central feature of government policies for national development. Since 1945 successive Australian governments have borne a substantial part of the passage costs of selected migrants from overseas countries. The following table shows the numbers of persons who were assisted to come to Australia by the Australian Government under all assisted passage schemes during the period 1946 to 1971.

ASSISTED MIGRATION: AUSTRALIA, 1946 TO 1971

Period	Nominated and selected (assisted) arrivals
1946–50 . . . . .	273,195
1951–55 . . . . .	275,241
1956–60 . . . . .	305,517
1961–65 . . . . .	337,132
1966–70 . . . . .	537,478
1965 . . . . .	93,653
1966 . . . . .	89,743
1967 . . . . .	82,247
1968 . . . . .	105,102
1969 . . . . .	125,958
1970 . . . . .	134,428
1971 . . . . .	103,811

Details of the joint scheme of assisted immigration arrived at by agreement between the Commonwealth and State Governments, which operated from 1920 to 1939, were published in earlier issues of the Year Book (*see* No. 38, page 576). After the outbreak of hostilities in 1939 it was decided to discontinue the grant of assisted passages for the duration of the war.

### Migration from Britain

At the conclusion of the 1939-45 War two migration agreements were negotiated between the Australian and British Governments and came into operation on 31 March 1947. One of these provided for the grant of free passages to British ex-servicemen and their dependants and was terminated on 28 February 1955. The other agreement to provide assisted passages has continued in operation by renewal from time to time.

*Assisted passages.* Each migrant travelling under the Assisted Passage Scheme from Britain who is 19 years of age or over contributes £Stg10 towards his passage costs. Migrants under 19 years of age make no contribution. The Australian Government meets the balance of the transport costs.

Eligibility for consideration for assisted passages is confined generally to citizens of the United Kingdom and Colonies, normally resident in Britain.

*Number of arrivals.* The numbers of British migrants who came to Australia under the United Kingdom Assisted Passage Agreement during the period January 1947 to June 1971 are given in the following table according to the State or Territory of intended residence.

**UNITED KINGDOM ASSISTED PASSAGE AGREEMENT: NUMBER OF MIGRANTS(a)**  
**STATES AND TERRITORIES OF INTENDED RESIDENCE**  
**JANUARY 1947 TO JUNE 1971**

<i>Period</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T. and N.T.</i>	<i>Cwlth</i>
January 1947 to June 1963 . . .	150,590	141,506	52,726	60,406	45,311	13,412	5,687	469,638
1963-64 . . .	15,199	14,170	5,396	12,762	5,780	912	411	54,630
1964-65 . . .	23,759	16,986	6,385	15,676	6,336	1,161	385	70,688
1965-66 . . .	21,546	14,862	5,671	17,065	9,965	1,183	462	70,754
1966-67 . . .	20,586	14,995	5,538	13,768	13,965	1,234	484	70,570
1967-68 . . .	16,297	11,929	4,639	8,384	13,034	1,196	398	55,877
1968-69 . . .	23,754	14,705	5,954	12,046	14,990	1,536	399	73,384
1969-70 . . .	22,583	13,448	5,843	11,515	13,955	1,268	423	69,035
1970-71 . . .	16,932	10,801	5,095	10,003	12,431	1,137	456	56,855
<b>Total January 1947 to June 1971 . . .</b>	<b>311,246</b>	<b>253,402</b>	<b>97,247</b>	<b>161,625</b>	<b>135,767</b>	<b>23,039</b>	<b>9,105</b>	<b>991,431</b>

(a) Includes child migrants.

### Maltese migration

A scheme of assisted migration entered into by the Australian and Maltese Governments in 1948 has been renewed from time to time and the current agreement was signed on 14 December 1970. The present scheme provides for selected persons aged 19 years and over to contribute \$A25 towards passage costs. Migrants under 19 years of age make no contribution.

The Australian Government meets the balance of the transport costs.

### Foreign migration

Australia has migration agreements and arrangements with Austria, Belgium, Germany, Greece, Italy, Netherlands, Spain, Turkey and recently with Yugoslavia whereby selected persons aged 19 years and over may migrate to Australia for a personal contribution of \$A25 towards passage costs, with no contribution required from those under 19 years. Assisted passage schemes for refugees are operated in several of these countries. Details of schemes may be found in Year Book No. 55, pages 148-9.

The Special Passage Assistance Programme is a unilateral scheme which provides financial assistance of up to \$A335 for persons 19 years and over and up to \$A360 for those under 19 years. It applies to selected Europeans ineligible under other schemes who are resident in Britain, Ireland, Western Europe, and also certain countries in Central and South America, Africa and Asia.

A scheme similar to the Special Passage Assistance Programme applies to the United States of America.

### Accommodation of migrants

Migrants must be assured of accommodation on arrival, unless they have sufficient funds to be independent. For both assisted and unassisted migrants nominated by relatives or friends this initial accommodation is usually in private homes. Most non-British and many British assisted migrants

are nominated by the Commonwealth Government and provided with transitory accommodation in migrant hostels operated by Commonwealth Hostels Ltd, a non-profit making Government-sponsored company registered in Victoria. These hostels, which provide a range of services to help migrants to settle in Australia, are progressively being improved to provide accommodation with private facilities for all families. The total capacity of hostels is now about 17,000. A further 1,850 migrants nominated by the Commonwealth can be accommodated in self-contained flats. Hostel accommodation is available to families for up to 12 months, while tenancies of flats are limited to six months. For Commonwealth nominated migrant families wishing to settle in country areas there is an arrangement involving subsidised boarding house accommodation for up to six months. Single unaccompanied migrant women are provided with subsidised accommodation for up to three months in hostels in capital cities run by organisations such as the Y.W.C.A., Travellers' Aid Society of Victoria, and the Salvation Army.

British assisted migrants nominated by State Governments are provided with initial accommodation in reception centres operated by the State immigration authorities. The Commonwealth Government contributes to the capital cost of these establishments on a dollar for dollar basis.

### The Intergovernmental Committee for European Migration (ICEM)

This Committee was established in 1951 to perform functions that had formerly been carried out by the International Refugee Organization. In addition to assuming responsibility for the resettlement of refugees, ICEM is concerned with the movements of national migrants from Europe. Australia was one of the sixteen foundation members of the Committee: there are now thirty-one member countries.

The three main functions of ICEM are the movement of national migrants and refugees, the provision of related services and developmental activities and technical co-operation.

Up to 31 December 1971 ICEM had moved 1,844,040 persons, of whom 609,531 (416,079 nationals and 193,452 refugees) had departed for Australia.

### Summary of arrivals of assisted migrants

The following table shows the number of assisted migrants who arrived in Australia in each of the last five financial years and since January 1947. All arrivals included in this table have obtained some financial assistance from the Australian Government towards payment of their passage money. Transport to Australia for the migrants concerned has been arranged on ships and aircraft under charter to the Department of Immigration, ships and aircraft under charter to the Intergovernmental Committee for European Migration, and normal commercial shipping and airlines. The arrivals under these schemes include a small number of nationals of countries other than those referred to, and stateless persons.

### ARRIVALS UNDER ASSISTED MIGRATION SCHEMES: AUSTRALIA, JANUARY 1947 TO JUNE 1971

<i>Assisted migration scheme</i>	<i>January 1947 to June 1966</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>January 1947 to June 1971</i>
Austrian . . . . .	19,309	556	466	419	555	440	21,745
Belgian . . . . .	1,826	236	249	262	201	167	2,941
General Assisted Passage(a)	32,044	2,584	2,101	2,467	1,192	..	40,388
German . . . . .	78,937	2,932	3,204	2,449	3,148	2,622	93,292
Greek . . . . .	42,421	2,888	4,188	6,189	6,249	6,198	68,133
Italian . . . . .	41,309	287	1,381	4,686	5,257	4,615	57,535
Maltese . . . . .	37,632	754	910	755	641	1,048	41,740
Netherlands . . . . .	70,437	1,383	1,781	2,406	2,304	1,724	80,035
Refugee . . . . .	213,442	1,805	3,226	7,613	16,495	11,812	254,393
Spanish . . . . .	8,077	91	82	878	1,130	1,013	11,271
Special Passage Assistance Programme(b)	..	4,638	11,170	14,508	20,437	22,578	73,331
Turkish . . . . .	..	..	..	2,014	3,542	3,369	8,925
United Kingdom . . . . .	665,710	70,570	55,877	73,384	69,035	56,855	991,431
Yugoslav . . . . .	..	..	..	..	..	5,853	5,853
Other schemes . . . . .	28,098	..	..	439	1,682	1,553	31,772
<b>Total . . . . .</b>	<b>1,239,242</b>	<b>88,724</b>	<b>84,635</b>	<b>118,469</b>	<b>131,868</b>	<b>119,847</b>	<b>1,782,785</b>

(a) Mostly Scandinavians, U.S. Americans, and British nationals from countries other than the United Kingdom.

(b) Includes United States Passage Assistance Programme (U.S.P.A.P.).



### Immigration Advisory, Planning and Publicity Councils

Three bodies have been established to advise the Minister for Immigration on the social, economic and publicity aspects of the immigration programme.

The *Immigration Advisory Council*, established in 1947, is representative of a broad cross-section of the Australian community. Members, in general, represent national organisations e.g. the Australian Council of Trade Unions, the Returned Servicemen's League of Australia, and the National Youth Council. The Council advises the Minister on the integration of migrants. The *Immigration Planning Council*, established in 1949 comprises members of the community who are recognised leaders in industry (both trade unions and employers), economics, science and public administration. The Council advises the Minister on the economic considerations affecting the immigration programme, size, and distribution of future population and urban environmental development. The *Immigration Publicity Council*, established in 1962, advises on publicity and publications used in Australia and overseas. Its members represent the press (including the foreign language newspapers), radio, advertising and television interests.

### Professional migration

The Department of Immigration, working in co-operation with the Department of Labour and National Service, provides a special service, including advisory staff in London, to encourage immigration of professionally qualified persons by giving advice and information on prospects in Australia and by putting such applicants in touch with Australian employers.

On 27 March 1969, the Minister for Immigration announced the establishment of a Committee on Overseas Professional Qualifications, which has the task of collating information about, and evaluating the comparability of overseas with Australian professional qualifications.

## The regulation of immigration into Australia

### Powers and legislation of the Commonwealth

Under section 51 (xix), (xxvii) and (xxviii) of the Commonwealth Constitution, the Parliament of the Commonwealth is empowered to make laws with respect to immigration, emigration, aliens and the influx of criminals. Immigration into Australia is regulated by the *Migration Act* 1958-1966 which came into force on 1 June 1959.

Any immigrant entering Australia after the commencement of the Act without having been granted an 'entry permit' or who is not within an exempted class is a prohibited immigrant. Exempted persons include diplomatic, consular and trade representatives of other countries, and seamen who enter with leave while their ships are in Australian ports. For the purposes of the Migration Act an immigrant includes a person entering for temporary stay.

An entry permit is normally granted at the port of entry by means of a stamp in the traveller's passport or equivalent travel document. No form of application is involved. Temporary permits are granted to visitors and persons whose stay is to be of limited duration. For other persons permits are issued without limitation as to stay. A person who is refused an entry permit must not be permitted (by the carrier company) to enter Australia; otherwise the carrier company is liable to a fine of \$1,000.

The Act contains provision for the deportation of persons who enter Australia without an entry permit, who overstay their approved period of residence or who are convicted of crimes. It also contains provisions relating to the emigration of children and Aborigines.

The Act does *not* affect passport or visa requirements for travel to Australia.

The *Aliens Act* 1947-1966 provides that a register of aliens shall be maintained for every State and mainland Territory of Australia. Unless exempted, aliens 16 years of age and over are required to register with the Department of Immigration and to notify that Department of their address, occupation, or employment during the month of September each year. They are required to notify marriage within thirty days of marriage taking place. The Act provides also that the consent of the Department must be obtained before an alien may change his surname.

The *Immigration (Guardianship of Children) Act* 1946-1966 provides that the Minister for Immigration becomes the legal guardian of every person under the age of 21 years who enters Australia (except for certain exempted groups) other than in the charge of, or for the purpose of living in the care of, a parent or adult relative. It is primarily administered through the child welfare authorities in each State and mainland Territory who, as the Minister's delegates under the Act, supervise the welfare of each 'immigrant child'.

### Conditions of immigration into Australia

Australia's immigration policy is directed towards the maintenance of a socially cohesive and homogeneous nation. It seeks to avoid the creation of permanent minority groups resistant to integration even through successive generations. The policy does not exclude persons of any ethnic origin; but it does exercise prudent caution in the matter of accepting large numbers of people with substantially different backgrounds, characteristics and customs who may resist general integration even in the long term.

*Admission of persons of European descent.* Aliens of European descent, citizens of Malta, Cyprus and Mauritius and residents of the Seychelle Islands desiring to settle permanently in Australia are required to obtain authority for admission from the Department of Immigration or an Australian overseas post. Their admission under the present policy is subject to clearance on health, character, and security grounds, and depends on their suitability as settlers generally.

*Non-Europeans.* The present policy permits the Minister to authorise the entry of non-Europeans taking into account their qualifications, their ability to integrate readily into the community and other aspects including considerations of a humanitarian nature and broad national interest. It provides *inter alia* that non-Europeans may be admitted:

- (i) who are the spouses, unmarried minor children, aged parents or fiancé(e)s of Australian residents or of persons who have authority to enter or remain in Australia for residence; or
- (ii) on the basis of their general suitability, their ability to integrate readily and their having qualifications which are in demand and positively useful to Australia. Examples of those who may qualify for entry in this way are:

persons with specialised technical skills for appointments for which local residents are not available;

persons of high attainment in the arts and sciences, or of prominent achievement in other ways;

persons eligible to practise in a profession in Australia in which they may be absorbed without difficulty;

executives, technicians, and other specialists who have spent substantial periods in Australia—for example, with the branches here of large Asian companies—and who have qualifications or experience in positive demand here;

businessmen who in their own countries have been engaged in substantial international trading and would be able to carry on such trade from Australia;

persons who have been of particular and lasting help to Australia's interest abroad in trade or in other ways;

persons who by former residence in Australia or by association with Australia have demonstrated an interest in or identification with Australia that should make their future residence here feasible.

*Persons of mixed descent.* Persons of part European/part non-European descent may be admitted for residence where:

- (i) the applicant is suffering hardship through specific discrimination in his own country; or
- (ii) he has special skills or qualifications; or
- (iii) he has immediate family members resident in Australia. Immediate family relatives are defined as spouse, parent, child, brother or sister.

*Private students.* Young people may enter Australia for the purpose of study, irrespective of their countries of origin. The greater proportion of such private students in Australia are from Asia, the Pacific area and, to a lesser extent, from the continent of Africa (there are at present about 10,000 private students in Australia). The objective is to provide the opportunity for young people in these areas to come to Australia for advanced secondary, tertiary and other post-secondary study and training which will result in qualifications in demand and of use in their countries. The student, as well as meeting other requirements of entry, must have the capacity to undertake the course of study proposed and produce evidence of enrolment and assurances as to maintenance and accommodation. The student is admitted with temporary resident status and is required to acknowledge that he is obliged to return home on completing the approved course of study or training and that authority for stay and for extensions of stay as a student is dependent upon satisfactory academic progress.

In addition to visitors and students, provision exists also for the entry on a limited temporary residence basis of staffs of companies, professional, technical and specialist personnel, and of persons coming for medical treatment, religious training, or as sportsmen and entertainers, and in other miscellaneous categories.

## Passports

Australian passports are issued under the *Passports Act* 1938-1966 and Passport Regulations. Passports are obtainable on application at offices of the Commonwealth Department of Immigration in each State, the Northern Territory, and the Australian Capital Territory, from overseas offices of that Department, from any Australian diplomatic or consular mission abroad, or from the office of any Australian Government Trade Commissioner overseas. Applicants for passports must furnish evidence of their identity and nationality and pay a fee of four dollars. Approximately 177,000 Australian passports are issued each year in Australia and abroad.

## Citizenship and naturalisation

### Commonwealth legislation

The *Nationality and Citizenship Act* 1948 which came into force on 26 January 1949 created the status of 'Australian citizenship', declared Australian citizens to be British subjects and recognised as British subjects the citizens of other Commonwealth countries. Australian citizenship was acquired automatically by persons who were British subjects on 26 January 1949 and who (a) were born in Australia or New Guinea, (b) were naturalised in Australia, (c) had been ordinarily resident in Australia or New Guinea for the five years immediately prior to that date, (d) were the wives of persons who became Australian citizens on that date and had entered Australia with resident status prior to 26 January 1949, or (e) were the children born abroad of persons referred to in (a) or (b) and who entered Australia without being placed under immigration restriction.

For the purposes of the Act 'Australia' includes the Territories of the Commonwealth that are not Trust Territories.

Australian citizenship may be acquired (a) by birth in Australia, (b) by birth abroad subject to registration of the birth at an Australian Consulate, (c) by naturalisation in the case of aliens or protected persons, (d) by registration in the case of citizens of other Commonwealth countries and Irish citizens and, (e) by notification in the case of British subjects who have lived in Australia for five years, have resident status and are not liable to deportation. Generally, aliens are required to spend five years residence in Australia but those who can read and write English proficiently may be naturalised after three years. Citizenship may be granted earlier to persons who are the spouses of Australian citizens, persons who have lived in other Commonwealth countries, persons who have served in the Commonwealth Armed Forces, and persons who were formerly Australian citizens or are minors.

The Act recognises the independence of married women. Australian citizenship is not lost solely by marriage to an alien nor do alien women acquire Australian citizenship upon marriage to an Australian citizen. Alien wives of Australian citizens may be naturalised under easier conditions than those which apply to other aliens.

On 4 June 1969 the Act became the *Citizenship Act* 1948-1969.

### Persons granted Australian citizenship by naturalisation and registration during 1970-71

#### PERSONS GRANTED AUSTRALIAN CITIZENSHIP BY NATURALISATION, 1970-71

		PREVIOUS NATIONALITY			
Albanian . . .	5	Dutch . . .	1,761	Jordanian . . .	114
Argentinian . . .	42	Egyptian . . .	1,123	Korean . . .	9
Australian pro- tected person . . .	83	Estonian . . .	15	Latvian . . .	77
Austrian . . .	398	Filipino . . .	136	Lebanese . . .	849
Belgian . . .	142	Finnish . . .	215	Lithuanian . . .	34
Brazilian . . .	15	French . . .	178	Mexican . . .	1
British protected person . . .	2	German . . .	1,545	Norwegian . . .	33
Bulgarian . . .	18	Greek . . .	6,754	Polish . . .	1,231
Burmese . . .	236	Hungarian . . .	549	Portuguese . . .	103
Chilean . . .	20	Indonesian . . .	30	Romanian . . .	74
Chinese . . .	435	Iranian . . .	49	Russian . . .	268
Czechoslovak . . .	219	Iraqi . . .	119	Spanish . . .	323
Danish . . .	95	Israeli . . .	156	Stateless . . .	380
		Italian . . .	5,210	Swedish . . .	28
		Japanese . . .	29	Swiss . . .	156
				Syrian . . .	84
				Thai . . .	5
				Turkish . . .	80
				Ukrainian . . .	104
				United States American . . .	201
				Venezuelan . . .	4
				Vietnamese . . .	17
				Yugoslav . . .	3,511
				Other . . .	78
				<b>Total . . .</b>	<b>27,343</b>



The numbers of persons affected by certificates of naturalisation granted in 1970-71 by State or Territory of residence were as follows: New South Wales, 8,945; Victoria, 11,882; Queensland, 958; South Australia, 2,481; Western Australia, 1,847; Tasmania, 324; Northern Territory, 166; Australian Capital Territory, 554; New Guinea, 186; Total, 27,343.

PERSONS GRANTED AUSTRALIAN CITIZENSHIP BY REGISTRATION, 1970-71  
NATIONALITY

Citizens of—	Citizens of—	Citizens of—	Citizens of—
Canada . . . 35	Malta . . . 75	United King- dom and Colonies . . . 2,763	British— country of citizenship other or not stated . . . 172
Ceylon . . . 722	New Zealand . . . 96		
Cyprus . . . 157	Pakistan . . . 69		
Fiji . . . 25	Rhodesia . . . 29		
India . . . 2,721	Singapore . . . 157		
Ireland . . . 112	South Africa . . . 248		
Malaysia . . . 369			<b>Total . . . 7,750</b>

PERSONS GRANTED AUSTRALIAN CITIZENSHIP BY NATURALISATION  
JANUARY 1945 TO JUNE 1971

Previous nationality	Previous nationality	Previous nationality	Previous nationality
Albanian . . . 1,158	French . . . 2,754	Norwegian . . . 1,350	Ukrainian . . . 20,336
Austrian . . . 10,403	German . . . 50,898	Polish . . . 69,993	United States American . . . 1,843
Belgian . . . 1,085	Greek . . . 71,690	Portuguese . . . 796	Yugoslav . . . 51,808
Bulgarian . . . 1,361	Hungarian . . . 31,789	Romanian . . . 3,224	Others . . . 5,475
Chinese . . . 7,584	Indonesian . . . 288	Russian . . . 11,617	
Czechoslovak . . . 11,830	Israeli . . . 4,605	Spanish . . . 2,567	<b>Total . . . 662,898</b>
Danish . . . 2,684	Italian . . . 153,225	Stateless . . . 16,201	
Dutch . . . 75,599	Japanese . . . 778	Swedish . . . 801	
Egyptian . . . 3,086	Latvian . . . 18,236	Swiss . . . 2,285	
Estonian . . . 6,108	Lebanese . . . 6,701	Syrian . . . 323	
Finnish . . . 3,176	Lithuanian . . . 8,749	Turkish . . . 492	

More detailed statistics of persons granted Australian citizenship are shown in *Australian Immigration: Consolidated Statistics* published by the Department of Immigration.

### Migrant integration

Integration services assist migrants to settle in Australia. In addition to the direct service provided by the Department of Immigration through social workers, welfare and integration officers and a translation and interpreting service, the programme includes the following activities.

Migrant education services are available to help migrants to overcome language problems and to settle effectively into the Australian community. For adults instruction is provided in source countries before embarkation, on board ship and after arrival in Australia. Since April 1970 the special needs of certain groups of migrants, e.g. professional workers, women, adolescents, industrial workers, are being met by greater stress on accelerated forms of instruction and the development and use of television programmes and other audio-visual aids. Special English classes are also provided for migrant children in migrant hostels and in schools. At 30 June 1971, 36,000 migrants were receiving instruction under the adult programme and 21,000 children were receiving special tuition under the child migrant education programme.

As it is not always possible for migrants to have access to social workers in the capital city offices of the Department of Immigration, grants are paid by the Government to selected community-based voluntary welfare agencies to employ additional social workers to assist migrants locally.

Ethnic groups play an important part in the settlement of migrants. During 1969 a special liaison officer was appointed to develop links with these groups in the interests of migrants. A survey of ethnic organisations (approximately 1,000) in Australia and the services they provide, will be completed in 1972.

A team of psychologists undertakes surveys and other research into migrant integration and welfare in Australia and migrant selection overseas.

Eight Good Neighbour Councils in the six States and two Territories of Australia operate as autonomous voluntary organisations. These Councils co-ordinate and co-operate with the many community groups and people throughout Australia whose common objective is to assist migrants to integrate. In certain instances Councils offer direct services to migrants and are financially sponsored by grants from the Commonwealth Government. These grants enabled Councils at 1 January 1972, to pay the administrative costs involved in maintaining central offices in the capital cities, ten regional offices and five sub-offices as well as employing some seventy staff members. At the same time the Councils worked with more than 900 organisations and controlled a net-work of 86 branches and 530 representatives in cities and towns.

Citizenship Conventions are convened in Canberra at two-yearly intervals by the Commonwealth Government. Delegates from a wide range of community organisations and from Commonwealth and State Governments participate. The subjects discussed relate to the integration of migrants, Australian citizenship and the role of immigration in Australia's development. No conventions are being held during the years 1971 and 1972 because of economic restraint.

## CHAPTER 8

### VITAL STATISTICS

The tables in this chapter are confined to the principal characteristics of vital statistics for Australia and relate, in the main, to the year 1971 for marriages and 1970 for births, deaths, and infant deaths. Comparisons have been restricted, in general, to the individual years 1967 to 1971 and the five-year periods 1946–50 to 1966–70, while age data have been shown in five-year groups. Comparisons over longer periods, together with more detailed figures such as single age particulars and cross-classifications of various characteristics, are published in the annual bulletins, *Demography* (4.9) and *Causes of Death* (4.7). Current information is published in the *Monthly Review of Business Statistics* (1.4), the *Quarterly Summary of Australian Statistics* (1.3), the mimeograph bulletins *Births* (4.4), *Deaths* (4.8), *Marriages* (4.10) (annual) and *Vital and Population Statistics* (quarterly) (4.11).

In most tables the statistics of births, deaths and marriages exclude particulars of full-blood Aborigines for years before 1966. Differences between the statistics now published and those formerly published which implied the exclusion of Aboriginal vital events cannot be taken as reliable statistics of births, deaths, or marriages among full-blood Aborigines, because in many areas no satisfactory administrative or other basis existed for distinguishing vital events of full-blood Aborigines from those of part-Aborigines or the rest of the population.

Vital statistics for certain countries of the world are set out in International Vital Statistics at the end of this chapter.

#### Provisions for registration and compilation of statistics

In Australia, vital statistics are compiled from information supplied for the registration of births, deaths, and marriages. Each State and Territory has an independent system of registration. Provisions for the civil registration of births, deaths, and marriages have been in force in Tasmania from 1839, in Western Australia from 1841, in South Australia from 1842, in Victoria from 1853, and in New South Wales and Queensland (then part of New South Wales) from 1856. Registration in the Territories is administered by the Commonwealth Government, registration having been taken over from South Australia in 1911 in respect of the Northern Territory and from New South Wales in 1930 in respect of the Australian Capital Territory. The authority responsible for the registration of births, deaths, and marriages occurring within his particular State or Territory is the Registrar-General (the Government Statist in Victoria) or the Principal Registrar.

The statistics in this chapter refer to events registered by the different State and Territorial registrars during the year shown. There is usually an interval of at least several days between the occurrence and the registration of an event. As a result of the delay in registration some events occurring in one year are not registered until the following year. Events which are registered more than ten years after date of occurrence are excluded from the statistics.

For tables showing statistics for the States and Territories, figures are compiled from registrations of events which took place in each State and Territory. Some events take place in States other than the State in which the persons concerned (e.g. mother, deceased, bride/groom) usually resided. The effect of such interstate registrations on State totals however is slight. See page 166.



## Marriages

The *Marriage Act* 1961-1966 came into operation on 1 September 1963, placing the marriage laws of all States, the mainland Territories and Norfolk Island on a uniform basis. Provision is made for the celebration of marriage by ministers of religion registered with the Registrar of Ministers of Religion appointed in each State and Territory by the Attorney-General, and by certain civil officers, in most cases district registrars. In each State or Territory the authorised celebrant is required to register particulars of the parties married with the appropriate registering authority as soon as practicable and in any case not later than fourteen days after the marriage.

The marriage of minors is not permissible without the consent of parents or guardians or (where this is not obtainable) of a magistrate or some other prescribed authority. The *Marriage Act* 1961-1966 provides that the minimum age at which persons are legally free to marry is 18 years for males and 16 years for females. A judge or magistrate may, in exceptional circumstances, make an order authorising a male who has attained 16 years or a female who has attained 14 years to marry a person of marriageable age.

### Numbers of marriages and crude marriage rates

#### MARRIAGES(a): STATES AND TERRITORIES, 1946 TO 1971

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Annual average—									
1946-50 . . .	30,162	20,453	10,666	6,581	5,205	2,529	114	181	75,891
1951-55 . . .	28,483	20,007	10,171	6,290	5,232	2,539	146	234	73,102
1956-60 . . .	28,432	20,422	10,254	6,517	5,145	2,573	190	321	73,854
1961-65 . . .	31,788	23,262	11,437	7,514	5,768	2,700	248	533	83,250
1966-70 . . .	39,216	29,481	14,717	9,920	8,147	3,330	394	983	106,188
Annual total—									
1967 . . .	37,077	28,004	13,634	9,434	7,430	3,213	325	883	100,000
1968 . . .	39,213	29,724	14,860	9,652	8,086	3,426	419	965	106,345
1969 . . .	41,286	30,860	15,669	10,599	8,993	3,532	413	1,118	112,470
1970 . . .	42,928	31,729	16,082	10,864	9,227	3,535	501	1,200	116,066
1971 . . .	43,038	32,386	16,538	10,833	9,382	3,578	485	1,397	117,637

(a) Excludes particulars of full-blood Aborigines before 1966.

#### CRUDE MARRIAGE RATES(a): STATES AND TERRITORIES, 1946 TO 1971

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust
Average annual rate—									
1946-50 . . .	9.90	9.72	9.41	9.87	10.01	9.56	9.39	9.36	9.77
1951-55 . . .	8.41	8.34	7.91	8.11	8.44	8.35	9.13	8.20	8.29
1956-60 . . .	7.70	7.50	7.14	7.26	7.36	7.69	8.63	7.51	7.50
1961-65 . . .	7.86	7.64	7.27	7.42	7.43	7.49	8.09	7.26	7.63
1966-70 . . .	8.97	8.85	8.50	8.82	8.88	8.77	5.84	8.69	8.82
Annual rate—									
1967 . . .	8.63	8.55	8.02	8.50	8.45	8.56	5.26	8.53	8.47
1968 . . .	8.99	8.94	8.59	8.60	8.84	9.02	6.23	8.60	8.85
1969 . . .	9.30	9.12	8.89	9.30	9.43	9.18	5.69	9.19	9.18
1970 . . .	9.50	9.21	8.97	9.38	9.30	9.12	6.37	9.11	9.28
1971 . . .	9.35	9.24	9.05	9.22	9.12	9.16	5.67	9.70	9.22

(a) Number of marriages per 1,000 of mean population. Excludes particulars of full-blood Aborigines before 1966.

The crude marriage rates for Australia and the more populous countries of the world are shown for the latest available year in International Vital Statistics at the end of this chapter.

**Previous marital status**

In most years about ninety per cent of grooms and brides are single at marriage, six per cent divorced and three per cent widowed.

**PREVIOUS MARITAL STATUS OF BRIDEGROOMS AND  
BRIDES: AUSTRALIA, 1971**

<i>Previous marital status of bridegrooms</i>	<i>Previous marital status of brides</i>			<i>Total bride- grooms</i>
	<i>Spinsters</i>	<i>Widows</i>	<i>Divorced</i>	
Bachelors . .	101,242	1,169	3,839	106,250
Widowers . .	921	1,762	921	3,604
Divorced . .	4,174	902	2,707	7,783
<b>Total brides .</b>	<b>106,337</b>	<b>3,833</b>	<b>7,467</b>	<b>117,637</b>

**Age and previous marital status at marriage**

There were 18,678 males under 21 years of age married during 1971, while the corresponding number of females was 52,467.

**AGE AND PREVIOUS MARITAL STATUS OF BRIDEGROOMS AND BRIDES  
AUSTRALIA, 1971**

<i>Age at marriage (years)</i>	<i>Bridegrooms</i>				<i>Brides</i>			
	<i>Bachelors</i>	<i>Widowers</i>	<i>Divorced</i>	<i>Total</i>	<i>Spinsters</i>	<i>Widows</i>	<i>Divorced</i>	<i>Total</i>
Under 20 . .	9,134	..	..	9,134	35,820	5	8	35,833
20-24 . .	64,116	22	234	64,372	56,447	115	781	57,343
25-29 . .	22,805	77	1,405	24,287	9,729	214	1,784	11,727
30-34 . .	5,705	129	1,506	7,340	2,342	238	1,334	3,914
35-39 . .	2,100	197	1,155	3,452	844	310	1,006	2,160
40-44 . .	1,134	318	1,117	2,569	476	386	978	1,840
45-49 . .	569	403	920	1,892	266	569	755	1,590
50-54 . .	315	480	631	1,426	145	538	459	1,142
55-59 . .	154	503	422	1,079	103	512	218	833
60-64 . .	118	537	230	885	84	442	88	614
65 and over .	100	938	163	1,201	81	504	56	641
<b>Total .</b>	<b>106,250</b>	<b>3,604</b>	<b>7,783</b>	<b>117,637</b>	<b>106,337</b>	<b>3,833</b>	<b>7,467</b>	<b>117,637</b>

**RELATIVE AGES OF BRIDEGROOMS AND BRIDES: AUSTRALIA, 1971**

<i>Age of bride- groom (years)</i>	<i>Age of bride (years)</i>								<i>Total bride- grooms</i>
	<i>Under 15</i>	<i>15-19</i>	<i>20-24</i>	<i>25-29</i>	<i>30-34</i>	<i>35-39</i>	<i>40-44</i>	<i>45 and over</i>	
Under 20 . .	6	7,658	1,416	48	3	3	..	..	9,134
20-24 . .	3	24,040	37,590	2,447	228	51	9	4	64,372
25-29 . .	..	3,511	14,642	5,089	812	168	47	18	24,287
30-34 . .	..	478	2,754	2,473	1,098	352	117	68	7,340
35-39 . .	..	91	631	1,002	832	500	256	140	3,452
40-44 . .	..	32	194	411	528	539	488	377	2,569
45-49 . .	..	8	76	165	260	287	403	693	1,892
50-54 . .	..	4	23	47	92	154	304	802	1,426
55-59 . .	..	1	11	26	41	62	136	802	1,079
60-64 . .	..	1	5	11	15	29	56	768	885
65 and over .	..	..	1	8	5	15	24	1,148	1,201
<b>Total brides</b>	<b>9</b>	<b>35,824</b>	<b>57,343</b>	<b>11,727</b>	<b>3,914</b>	<b>2,160</b>	<b>1,840</b>	<b>4,820</b>	<b>117,637</b>

The median age at marriage of brides and bridegrooms has declined during recent years. The median ages, in years, of brides for each of the five years to 1971 were: 1967, 21.49; 1968, 21.50; 1969, 21.54; 1970, 21.46 and 1971, 21.39. The median ages, in years, of bridegrooms were: 1967, 24.06; 1968, 23.89; 1969, 23.78; 1970, 23.74 and 1971, 23.78. The difference in the median age at marriage between brides and bridegrooms is generally about two years, the difference in 1971 being 2.39 years. The median age is the age at which half of the bridegrooms or brides were younger and half were older than that age. It gives a better indication of the most common age at marriage than the average age (mean).

### Countries of birth of persons marrying

#### RELATIVE COUNTRIES OF BIRTH OF BRIDEGROOMS AND BRIDES AUSTRALIA, 1971

Country of birth of bride												
Country of birth of bridegroom	Australia	New Zealand	United Kingdom and Ireland	Germany	Greece	Italy	Malta	Netherlands	Yugoslavia	Other European	Other and unspecified	Total bridegrooms
Australia . . . . .	77,313	439	4,896	789	86	312	213	797	97	490	1,115	86,547
New Zealand . . . . .	988	170	111	22	1	6	3	12	2	12	49	1,376
United Kingdom and Ireland . . . . .	7,190	141	2,331	155	14	46	32	142	26	111	308	10,496
Germany . . . . .	1,446	20	173	245	5	12	15	33	18	97	69	2,133
Greece . . . . .	288	4	25	10	1,801	9	5	7	26	27	112	2,314
Italy . . . . .	1,256	12	149	43	15	1,928	38	25	28	64	86	3,644
Malta . . . . .	384	4	69	14	1	11	353	10	4	5	17	872
Netherlands . . . . .	1,261	10	146	40	1	6	5	203	4	21	48	1,745
Yugoslavia . . . . .	361	4	54	36	29	37	10	11	1,336	56	35	1,969
Other European . . . . .	1,074	26	192	154	34	23	15	38	52	728	138	2,474
Other and unspecified . . . . .	1,802	47	272	54	67	47	12	38	13	100	1,615	4,067
Total brides	93 363	877	8,418	1,562	2,054	2,437	701	1,316	1,606	1,711	3,592	117,637

### Celebration of marriages

Under the provisions of the *Marriage Act* 1961-1966 marriages may be celebrated either by ministers of religion who are registered for that purpose with the Registrars of Ministers of Religion in each State of Territory, or by certain civil officers, in most cases district registrars. Most of the marriages are celebrated by ministers of religion. The registered ministers in 1971 belonged to more than fifty different religious denominations.

#### MARRIAGES BY AUTHORISED CELEBRANTS: STATES AND TERRITORIES, 1971

Category of authorised celebrant	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Australia			
								A.C.T.	No.	Pro- portion of total	
Registered ministers of recognised religious denominations—											
Roman Catholic . . . . .	12,230	9,784	4,510	2,169	2,515	757	108	487	32,560	27.7	
Church of England . . . . .	12,736	7,230	4,168	2,135	2,700	1,359	63	331	30,722	26.1	
Methodist . . . . .	4,459	3,174	2,424	2,440	932	498	70	44	14,041	11.9	
Presbyterian . . . . .	3,671	4,822	2,217	379	478	150	27	101	11,845	10.1	
Orthodox . . . . .	1,131	1,508	111	159	93	14	19	26	3,061	2.6	
Baptist . . . . .	758	560	322	285	118	86	3	13	2,145	1.8	
Lutheran . . . . .	188	262	450	651	39	7	6	21	1,624	1.4	
Churches of Christ . . . . .	195	592	173	350	202	19	..	12	1,543	1.3	
Congregational . . . . .	343	393	115	337	114	43	4	4	1,353	1.2	
Salvation Army . . . . .	175	165	90	71	37	17	8	5	568	0.5	
Other . . . . .	766	894	365	171	195	103	8	4	2,506	2.0	
Other authorised celebrants—											
Ministers of religion . . . . .	174	187	35	84	55	..	4	5	544	0.5	
Civil officers . . . . .	6,212	2,815	1,558	1,602	1,904	525	165	344	15,125	12.9	
Grand Total . . . . .	43,038	32,386	16,538	10,833	9,382	3,578	485	1,397	117,637	100.0	
Proportion of total (per cent)—											
Ministers of religion . . . . .	85.57	91.31	90.58	85.21	79.71	85.33	65.98	75.38	87.14	..	
Civil officers . . . . .	14.43	8.69	9.42	14.79	20.29	14.67	34.02	24.62	12.86	..	



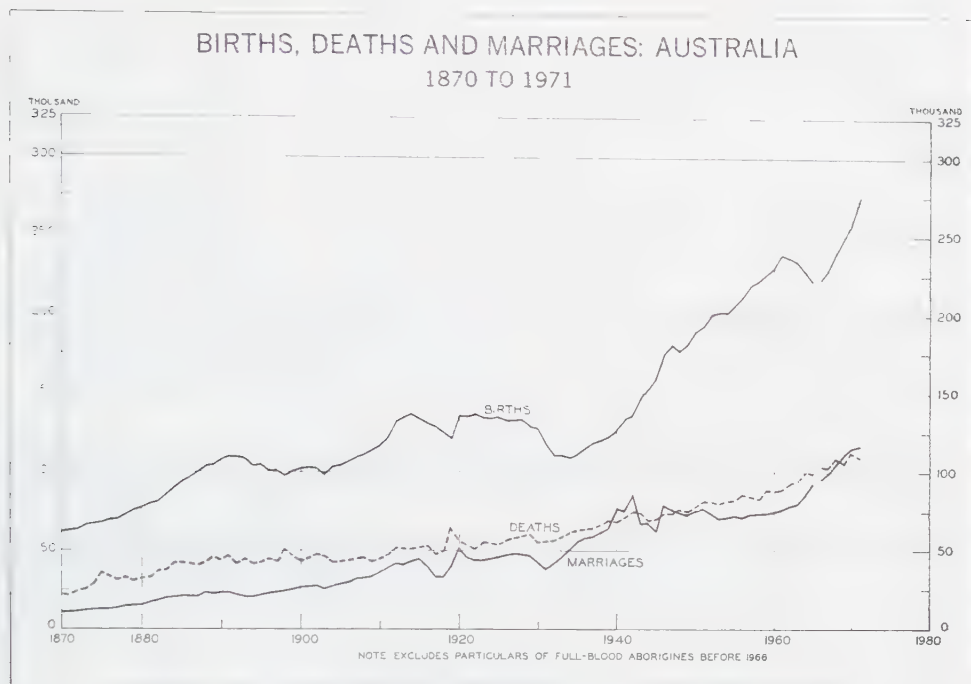


PLATE 19

**Divorce**

See the chapter Law, Order, and Public Safety.

**Births and Fertility**

Information concerning a birth is required to be supplied to the registration authority within 28 days in the Australian Capital Territory and the Northern Territory, and 60 days in the States.

Information is required in all States and Territories concerning what have been commonly known as 'stillbirths'. These are excluded from all the tables of births and deaths in this chapter and are included only in the special tables on stillbirths shown on pages 175-6.

**Number of live births**

Plate 19, above compares the annual number of births, deaths and marriages. During the 1940s, 1950s and 1960s annual births increased rapidly as fertility rose following the low birthrates of the depression years. The fall from 1961 to 1966 resulted from a steep decline in fertility. Since 1966, numbers have been increasing again.

**LIVE BIRTHS(a): STATES AND TERRITORIES, 1946 TO 1971**

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Annual average—									
1946-50 .	68,856	47,372	28,003	16,270	13,130	7,064	289	734	181,718
1951-55 .	73,737	53,770	30,983	18,045	15,724	7,774	468	922	201,423
1956-60 .	79,613	61,279	34,171	19,977	16,922	8,517	694	1,286	222,459
1961-65 .	82,896	65,193	35,357	21,377	16,861	8,439	897	1,932	232,952
1966-70 .	82,560	68,755	35,378	21,310	19,426	7,979	2,134	2,783	240,325
Annual total—									
1967 .	78,841	65,485	34,692	20,386	18,023	7,547	1,921	2,401	229,296
1968 .	81,696	70,228	35,190	21,207	19,541	8,317	2,084	2,643	240,906
1969 .	86,036	71,035	36,576	21,977	20,754	8,445	2,274	3,079	250,176
1970 .	88,448	73,019	37,530	22,617	21,618	8,185	2,624	3,475	257,516
1971 .	98,466	75,498	39,970	22,996	24,239	8,321	2,832	4,040	276,362

(a) Excludes particulars of full-blood Aborigines before 1966.

**Masculinity of live births**

There is a universal tendency for the number of male births to exceed female births usually by between 5 to 6 per cent. The masculinity of live births, is the number of males born for every 100 female births. When the number of births for which masculinity is being calculated is small (for example, totals for smaller States) considerable variation is shown. The following table shows the figures for Australia for each five year period from 1946 to 1970 and for each of the years 1967 to 1971.

**MASCULINITY(a) OF LIVE BIRTHS REGISTERED: AUSTRALIA, 1946 TO 1971**

	1946-50	1951-55	1956-60	1961-65	1966-70	1967	1968	1969	1970	1971
Total births	105.60	105.19	105.65	105.83	105.41	105.43	105.41	105.22	105.12	104.34
Ex-nuptial births	104.46	103.36	104.49	106.88	105.11	106.16	104.21	103.95	106.96	106.05

(a) Number of males born for every 100 female births. Excludes particulars of full-blood Aborigines before 1966.

**Crude birth rates**

The simplest method of measuring fertility is to relate the number of births to the mean population, which gives the crude birth rate. The crude birth rate measures the rate per thousand persons (irrespective of age or sex) at which the population has added to its numbers by way of births during a given period. Other methods of measuring fertility are shown on pages 168-70. The difference between the crude birth rate and the crude death rate is the rate of natural increase (the hatched area in plate 20, page 167). In the past 100 years the crude birth rate has shown a general downward trend. Since 1967 there has been a small upward movement, which is expected to continue for a few years, partly as a consequence of the increasing number of young women from the postwar baby boom who are now reaching maturity.

**CRUDE BIRTH RATES(a): STATES AND TERRITORIES, 1946 TO 1971**

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Average annual rates—</b>									
1946-50	22.60	22.51	24.69	24.41	25.24	26.71	23.77	37.92	23.39
1951-55	21.78	22.42	24.11	23.25	25.37	25.58	29.37	32.22	22.86
1956-60	21.55	22.52	23.80	22.27	24.20	25.45	31.49	30.10	22.59
1961-65	20.49	21.42	22.49	21.11	21.71	23.41	29.30	26.31	21.34
1966-70	18.89	20.64	20.43	18.95	21.17	21.01	31.65	24.60	19.97
<b>Annual rates—</b>									
1967	18.36	19.99	20.40	18.37	20.50	20.11	31.10	23.19	19.43
1968	18.74	21.12	20.35	18.89	21.37	21.90	31.01	23.56	20.06
1969	19.38	20.99	20.76	19.29	21.76	21.95	31.32	25.31	20.41
1970	19.56	21.19	20.94	19.53	21.80	21.11	33.38	26.38	20.59
1971	21.40	21.55	21.88	19.56	23.57	21.30	33.13	28.06	21.67

(a) Number of births per 1,000 of mean population. Excludes particulars of full-blood Aborigines before 1966.

The birth rates in the table above are based on *live births registered in the respective States and Territories*. Some confinements, however, take place in States other than the State in which the mother usually resides, particularly in areas near State borders. The variations thus caused in the birth rates for the States and Territories by *referring the birth registrations to the mother's usual residence* are shown by the following corrected rates for 1970—New South Wales, 19.62; Victoria, 21.17; Queensland, 20.85; South Australia, 19.43; Western Australia, 21.84; Tasmania, 21.15; Northern Territory, 34.14 and Australian Capital Territory, 26.01.

The crude birth rates of Australia and the more populous countries of the world for the latest available year are shown in International Vital Statistics at the end of this chapter.

**Fertility rates**

Changes in the crude birth rate are in general indicative of changes in fertility. However they may result from changes in the proportion of women of childbearing age in the population. Changes in the proportion of such women who are married may also affect fertility and the crude birth rate.

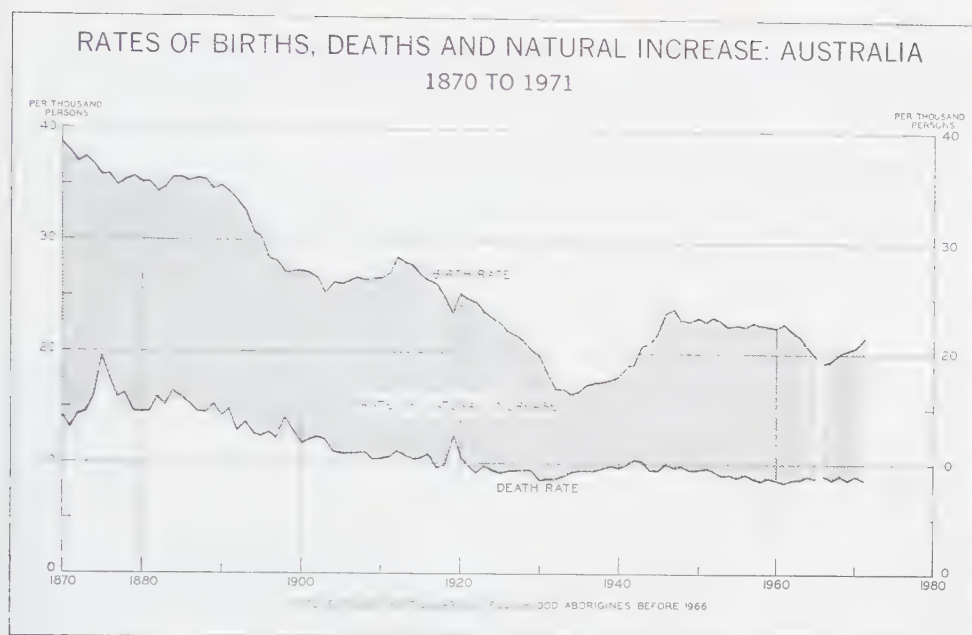


PLATE 20

The fertility rates in the following table are for the Census years 1881 to 1966. The births for the three years around the census are related to women of childbearing age as enumerated at each census. Although the childbearing age has been taken to be 15-44 years, births to younger and older women are included in the computations. Nuptial births are related to married women aged 15-44 years to give married fertility rates.

Although married fertility fell by 59 per cent between 1880-82 and 1965-67, total fertility and the crude birth rate fell by only 44 and 45 per cent. The effect of a decline in the fertility of married women on total fertility and the crude birth rate is partly offset by an increase in the proportion of such women in the population. In 1881 only 51 per cent of females aged 15-44 were married but in 1966, 67 per cent were married.

**CRUDE BIRTH RATES AND FERTILITY RATES: AUSTRALIA, 1880-82 TO 1965-67(a)**

Period	Average annual rates			Index Nos (Base: 1880-82 = 100)		
	Fertility rates			Fertility rates		
	Crude birth rate(b)	Nuptial births per 1,000		Crude birth rate(b)	Nuptial births per 1,000	
		Births per 1,000 women aged 15-44 years	per 1,000 married women aged 15-44 years		Births per 1,000 women aged 15-44 years	per 1,000 married women aged 15-44 years
1880-82 . . .	35.3	170	321	100	100	100
1890-92 . . .	34.5	159	332	98	94	103
1900-02 . . .	27.2	117	235	77	69	73
1910-12 . . .	27.2	117	236	77	69	74
1920-22 . . .	25.0	107	197	71	63	61
1932-34 . . .	16.7	71	131	47	42	41
1946-48 . . .	23.6	104	160	67	61	50
1953-55 . . .	22.7	109	149	64	64	46
1960-62 . . .	22.5	112	154	64	66	48
1965-67 . . .	19.5	95	132	55	56	41

(a) Excludes particulars of full-blood Aborigines before 1965-67.

(b) Number of births per 1,000 of mean population.



Age-specific birth rates

Fertility within the childbearing group varies considerably, as may be seen from the five-year age-specific rates in the following table. These rates were obtained by dividing births according to age of mother by the estimated number of women in the corresponding five-year age group.

Total fertility is obtained by summing single age specific rates or by summing five-year age-specific rates and multiplying by 5. This total, divided by 1000, represents the hypothetical number of children a women would bear during her lifetime if she experienced the rates of the year shown.

Since 1946, the fertility of younger women has increased, largely as a result of younger marriage, whereas fertility in the thirty and forty age groups has declined. Total fertility rose to a peak in 1961, of 3.4 children per woman, declined to 2.8 in 1967 and has been about 2.9 since.

AGE-SPECIFIC BIRTH RATES(a): AUSTRALIA, 1946 TO 1970

Period	Age group (years)							Total fertility
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
1946-50(b)	33.05	164.22	183.29	126.56	72.33	22.71	1.76	3.020
1951-55(b)	39.54	192.81	192.97	123.51	65.05	20.50	1.53	3.180
1956-60(b)	44.20	216.42	211.47	126.06	63.91	18.96	1.45	3.412
1961-65(b)	46.50	203.95	207.15	122.38	59.18	17.54	1.19	3.289
1966-70(b)	49.28	172.67	188.05	103.32	47.13	12.91	1.00	2.872
1966	49.26	172.81	183.29	105.28	50.60	14.28	1.09	2.883
1967	48.37	170.76	184.97	102.77	47.85	13.49	1.09	2.864
1968	48.88	173.64	190.80	103.30	46.74	12.89	1.05	2.899
1969	48.98	174.15	191.60	103.51	45.56	12.16	1.01	2.889
1970	50.89	172.00	189.59	101.75	44.88	11.74	0.78	2.857

(a) Number of births per 1,000 women in each age group. Excludes particulars of full-blood Aborigines before 1966. The age-specific rates for the years 1967 to 1970 are subject to revision when the age distribution of population is obtained from the results of the 1971 Population Census. (b) Average annual rates.

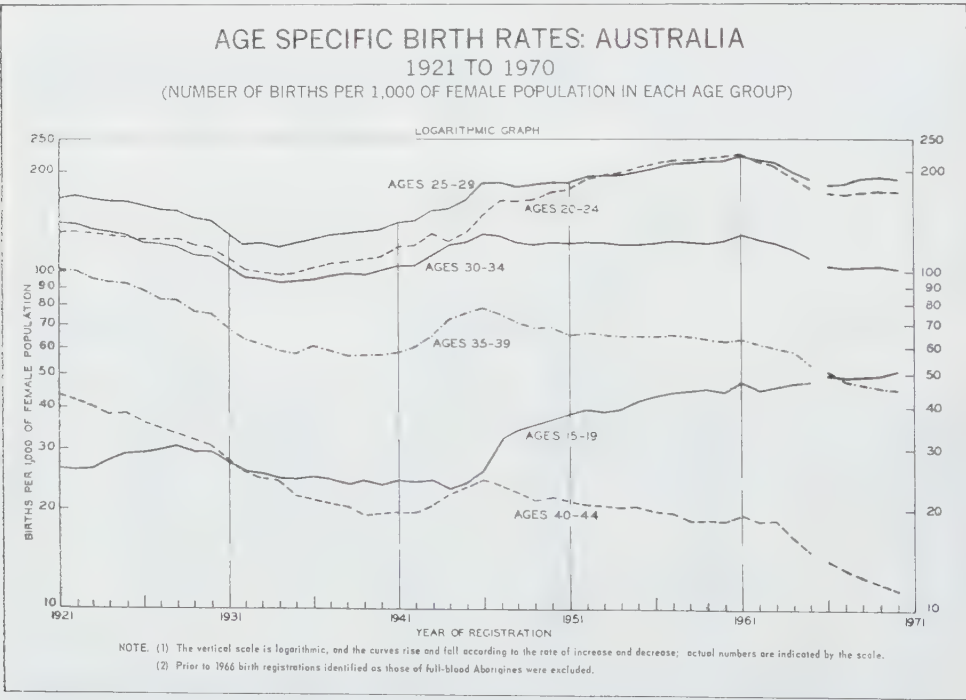


PLATE 21

**Gross and net reproduction rates**

The gross reproduction rate is derived from total fertility and the ratio of female to total births. It indicates the number of female children who would be born on average to women supposing the rates from which it was calculated were to apply throughout the reproductive period. It is an indication of the extent to which the population is reproducing itself except that it does not allow for females who failed to survive to the end of the childbearing period. The net reproduction rate allows for such mortality. It is obtained by multiplying the age-specific rates by the survivor proportions in the corresponding age group of the stationary or life table population. Mortality in childhood and young adulthood is now so low that there is little difference between current gross and net reproduction rates.

**GROSS AND NET REPRODUCTION RATES(a): AUSTRALIA, 1947 TO 1970**

Year	Gross reproduction rate	Net reproduction rate	Year	Gross reproduction rate	Net reproduction rate
1947 . . . .	1.494	(b)1.416	1967 . . . .	1.387	(d)1.342
1954 . . . .	1.559	(c)1.499	1968 . . . .	1.406	(d)1.360
1961 . . . .	1.728	(d)1.672	1969 . . . .	1.405	(d)1.360
1966 . . . .	1.400	(d)1.355	1970 . . . .	1.394	(d)1.349

(a) Excludes particulars of full-blood Aborigines before 1966. Gross and net reproduction rates for the years 1967 to 1970 are subject to revision consequent on any revisions of age-specific birth rates in accordance with 1971 Population Census results. (b) 1946-1948 mortality experience used. (c) 1953-1955 mortality experience used. (d) 1960-62 mortality experience used.

In the following table a comparison is given of the gross and net reproduction rates recorded for various countries in the period 1966 to 1970. The registration of vital events has not been fully established in many countries and consequently details for the calculation of reproduction rates for those countries are not available.

**GROSS AND NET REPRODUCTION RATES: VARIOUS COUNTRIES**

(Source: *The Population Index*, April-June 1971, Office of Population Research, Princeton University)

Country	Period	Reproduction rate		Country	Period	Reproduction rate	
		Gross	Net			Gross	Net
Panama . . . .	1967	2.55	2.30	Austria . . . .	1969	1.22	1.17
Mauritius . . . .	1968	2.24	1.98	Canada . . . .	1969	1.16	1.13
China (Taiwan) . . . .	1969	1.99	1.88	United States of America . . . .	1968	1.20	1.16
Ireland . . . .	1968	1.91	1.82	Germany, Fed. Rep. . . .	1968	1.16	1.11
Chile . . . .	1967	1.88	1.56	Yugoslavia . . . .	1967	1.23	1.14
Israel . . . .	1968	1.85	1.78	Belgium . . . .	1968	1.12	1.09
Romania . . . .	1968	1.70	1.60	Greece . . . .	1967	1.17	1.10
Iceland . . . .	1967	1.59	1.55	Denmark . . . .	1968	1.03	1.00
New Zealand . . . .	1968	1.54	1.50	Finland . . . .	1968	1.01	0.97
Australia . . . .	1970	1.39	1.35	Italy . . . .	1967	1.19	1.14
Scotland . . . .	1968	1.35	1.30	Sweden . . . .	1967	1.11	1.09
Norway . . . .	1968	1.33	1.30	Germany, Dem. Rep. . . .	1967	1.14	1.10
Portugal . . . .	1967	1.39	1.25	Czechoslovakia . . . .	1967	1.02	0.98
England and Wales . . . .	1968	1.24	1.21	Hungary . . . .	1968	1.00	0.95
Netherlands . . . .	1968	1.32	1.29	Japan . . . .	1967	1.08	1.05
France . . . .	1967	1.29	1.25				

**Fertility of marriages**

Estimates of the fertility of marriages may be made by relating nuptial births in each year to the marriages from which they could have resulted. Births to women of a certain number of years duration of marriage are related to the number of marriages taking place that number of years previously and the resulting rates are added to give a total for all durations, namely, the index of current marriage fertility.

The figure for a particular year gives the estimated number of children which a thousand marriages would produce according to the fertility conditions of that year.

Births are omitted from the calculation if the marriage did not take place in Australia. Births which occur overseas to Australian marriages cannot be included and hence some understatement is present.

The following table gives an analysis of the index, shown in the Total column, according to duration of marriage, expressing the results as births per thousand marriages.

**DURATION-SPECIFIC FERTILITY RATES(a): AUSTRALIA, 1959 TO 1970**

Births occurring in—	Duration of marriage (years)										20 and over	Total
	Under 1	1	2	3	4	Total under 5	5-9	10-14	15-19			
1959 . . . .	379	319	316	279	249	1,542	760	298	99	25	2,724	
1960 . . . .	382	322	317	288	249	1,558	772	302	100	25	2,757	
1961 . . . .	403	332	328	290	254	1,607	789	314	106	26	2,842	
1962 . . . .	389	318	324	290	247	1,568	781	308	101	22	2,780	
1963 . . . .	384	307	318	288	241	1,538	756	302	105	24	2,725	
1964 . . . .	368	288	296	275	231	1,458	712	283	99	21	2,573	
1965 . . . .	341	275	287	261	222	1,386	662	260	90	19	2,417	
1966 . . . .	324	258	282	260	215	1,339	638	238	84	19	2,318	
1967 . . . .	308	251	273	268	222	1,322	648	239	80	18	2,307	
1968 . . . .	308	247	280	267	235	1,337	668	234	79	17	2,335	
1969 . . . .	290	246	279	270	231	1,316	688	233	75	17	2,329	
1970 . . . .	278	236	275	262	231	1,282	675	230	75	16	2,278	

(a) Number of births per thousand marriages. From 1966 includes births of Aborigines where parents were legally married and excludes births of tribal marriages.

The summation of duration-specific rates for a particular year without reference to changing patterns in age at marriage or age of parents contributes to the hypothetical nature of the index. It is more satisfactory, therefore, to express the rates in cohort form by following the experience of marriages of a particular year cumulated over successive durations of marriage.

Since the fertile period of a marriage has a duration of up to some thirty years, completed fertility can only be determined with certainty for marriages occurring before 1940. Fortunately, because of the concentration of births in the early years of marriage the ultimate level of fertility and the size of family can be assessed with a fair degree of precision by the end of the fifteenth year. The most recent cohort to reach this duration was that of 1955-56.

To determine the relevant marriage cohorts from which births can have derived, a system of quarterly weights is applied. Births in 1969 to marriages in their third year, for example, could have arisen from marriages in any one of the eight quarters of 1966 and 1967. Proportions of the marriages in each of these quarters, namely  $\frac{1}{8}$ ,  $\frac{3}{8}$ ,  $\frac{5}{8}$ ,  $\frac{7}{8}$ ,  $\frac{5}{8}$ ,  $\frac{3}{8}$ ,  $\frac{1}{8}$  and  $\frac{1}{8}$  respectively, are summed to arrive at the total marriages in the 1966-67 cohort. This method is applied to all marriages of completed durations three or more years. The first two years of marriage are weighted on a monthly basis.

**CUMULATED DURATION-SPECIFIC FERTILITY RATES, MARRIAGE COHORTS(a)  
AUSTRALIA, 1955 TO 1970**

Marriages of year—	Completed duration of marriage (years)						
	1	2	3	4	5	10	15
1955-56 . . .	352	674	983	1,262	1,511	2,262	2,497
1956-57 . . .	367	685	1,001	1,289	1,543	2,262	..
1957-58 . . .	365	684	1,001	1,291	1,538	2,219	..
1958-59 . . .	379	701	1,029	1,319	1,560	2,216	..
1959-60 . . .	382	714	1,038	1,326	1,557	2,210	..
1960-61 . . .	403	721	1,039	1,314	1,536	2,194	..
1961-62 . . .	389	696	992	1,253	1,468	..	..
1962-63 . . .	384	672	959	1,219	1,441	..	..
1963-64 . . .	368	643	925	1,193	1,428	..	..
1964-65 . . .	341	599	872	1,139	1,370	..	..
1965-66 . . .	324	575	855	1,125	1,356	..	..
1966-67 . . .	308	555	834	1,096	..	..	..
1967-68 . . .	308	554	829	..	..	..	..
1968-69 . . .	290	526	..	..	..	..	..
1969-70 . . .	278	..	..	..	..	..	..

(a) Cumulated number of births per thousand marriages. From 1966 includes births of Aborigines where parents were legally married and excludes births of tribal marriages.



A more detailed analysis of the figures in the above table and of earlier cohorts has been made by tabulating the number of births within each duration of marriage which were first, second, third or subsequent births to the marriages under consideration. Details then derived of relative family size at each duration of marriage have enabled the computation of duration-parity-specific fertility rates.

### Ex-nuptial live births

A birth is registered as ex-nuptial if the parents were not married to one another at the time of the confinement. Births to tribally-married Aborigines are classified as nuptial. Ex-nuptial births have been increasing and in 1970 they comprised 8.30 per cent of all births. The variations in the proportions of ex-nuptial live births as between the individual States and Territories for 1970 and for Australia at intervals from 1946 to 1970 are shown in the following tables.

EX-NUPTIAL LIVE BIRTHS  
NUMBER AND PROPORTION, STATES AND TERRITORIES, 1970

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number	7,455	4,420	4,251	1,715	2,316	650	426	134	21,367
Proportion of total births %	8.43	6.05	11.33	7.58	10.71	7.94	16.23	3.86	8.30

EX-NUPTIAL LIVE BIRTHS: NUMBERS, PROPORTION AND RATES(a)  
AUSTRALIA, 1946 TO 1970

	Annual average					1966	1967	1968	1969	1970
	1946-50	1951-55	1956-60	1961-65	1966-70					
Number	7,349	7,999	10,027	13,798	18,937	16,830	17,734	19,171	19,585	21,367
Rates(b)	0.95	0.91	1.02	1.25	1.57	1.45	1.50	1.60	1.60	1.71
Proportion of total births %	4.04	3.97	4.51	5.92	7.88	7.52	7.73	7.96	7.83	8.30

(a) Excludes particulars of full-blood Aborigines before 1966.  
population.

(b) Number of ex-nuptial births per 1,000 of mean

A further measure of ex-nuptiality is obtained by calculating the number of ex-nuptial births per thousand of the single, widowed and divorced female population aged from 15 to 44 years. On this basis, the number of ex-nuptial births per 1,000 unmarried women of ages 15 to 44 is as follows: 1946-48, 11.45; 1953-55, 14.45; 1960-62, 18.49; and 1965-67, 20.96. Particulars of full-blood Aborigines are excluded throughout. Ex-nuptial births to married women, which are not recorded separately, are included in these figures and it is not possible to determine to what extent they influence the trend shown.

### Legitimations

Under the provisions of the Commonwealth *Marriage Act* 1961-1966, which came into operation on 1 September 1963, a child whose parents were not married to each other at the time of its birth becomes legitimised on the subsequent marriage of its parents. The legitimation takes place whether or not there was a legal impediment to the marriage of the parents at the time of the child's birth and whether or not the child was still living at the time of the marriage, or in the case of a child born before 1 September 1963, at that date. Prior to the introduction of this Act, legitimations took place under Acts passed in the several States to legitimise children born before the marriage of their parents, provided that no legal impediment to the marriage existed at the time of birth. On registration in accordance with the provisions of the Legitimation Acts, any child who came within the scope of their purposes, born before or after the passing thereof, was deemed to be legitimate from birth by the post-natal union of its parents and entitled to the status of offspring born in wedlock. The number of children legitimised in Australia during 1970 was 3,567.

### Multiple births

Because the current Australian birth statistics are based only on those confinements which resulted in a live-born child, the number of confinements for multiple births for Australia is understated—firstly, because in cases where all children of a multiple birth are stillborn the confinement is excluded, and secondly, because some cases of multiple births in which only one child was live-born are registered as single births.

## Number of confinements

The following table shows the number of single and multiple confinements and the number of live births. The table includes only those confinements resulting in at least one live birth.

## LIVE BIRTHS AND CONFINEMENTS: STATES AND TERRITORIES, 1970

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
LIVE BIRTHS									
Single births .	86,430	71,455	36,823	22,135	21,208	8,048	2,568	3,397	252,064
Twins .	1,992	1,532	701	470	407	137	56	75	5,370
Triplets .	22	28	6	12	3	..	..	3	74
Quadruplets .	4	4	..	..	..	..	..	..	8
Males .	45,217	37,350	19,324	11,555	11,172	4,232	1,328	1,794	131,972
Females .	43,231	35,669	18,206	11,062	10,446	3,953	1,296	1,681	125,544
<b>Total</b> .	<b>88,448</b>	<b>73,019</b>	<b>37,530</b>	<b>22,617</b>	<b>21,618</b>	<b>8,185</b>	<b>2,624</b>	<b>3,475</b>	<b>257,516</b>

## STILLBIRTHS ASSOCIATED WITH MULTIPLE BIRTHS INCLUDED ABOVE

Twins .	30	12	9	4	9	1	..	1	66
Triplets .	2	2	..	..	..	..	..	..	4
Quadruplets .	..	..	..	..	..	..	..	..	..

## CONFINEMENTS RESULTING IN BIRTHS SHOWN ABOVE

Nuptial .	80,068	67,856	32,968	20,679	19,117	7,472	2,176	3,303	233,639
Ex-nuptial .	7,382	4,382	4,212	1,697	2,300	645	420	133	21,171
<b>Total</b> .	<b>87,450</b>	<b>72,238</b>	<b>37,180</b>	<b>22,376</b>	<b>21,417</b>	<b>8,117</b>	<b>2,596</b>	<b>3,436</b>	<b>254,810</b>

NOTE. Owing to the registration procedure adopted in some States, it is possible that in some cases where one child only of a multiple pregnancy was liveborn, the confinement has been treated as a single birth. However, the numbers of multiple births are not significantly affected. See also page 174.

Multiple births recorded during 1970 comprised 2,718 cases of twins, 26 cases of triplets, and two cases of quadruplets, the resulting number of live-born and stillborn children respectively 5,370 and 66 for twins, 74 and 4 for triplets, 8 and 0 for quadruplets. This represents an average of 10.67 recorded cases of twins and 0.10 recorded cases of triplets per 1,000 confinements or, alternatively, mothers of twins represented 1 in every 94 mothers and mothers of triplets 1 in every 9,800. Total cases of multiple births represented 10.78 per 1,000 confinements or 1 in every 93 mothers.

## Confinements—relative ages of parents

The relative ages of the parents of children whose births were registered in 1970 have been tabulated separately for male and female births, multiple births being distinguished from single births. For confinements and for multiple births, the relative ages of parents are shown in *Demography*, Bulletin No. 86.

## CONFINEMENTS, BY RELATIVE AGES OR PARENTS: AUSTRALIA, 1970

	Age of mother (years)										
Age of father (years)	Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45 and over	Not stated	Total	
Under 20	1	3,400	624	10	4	..	..	..	..	4,039	
20-24	5	13,002	34,347	3,007	155	13	..	1	..	50,530	
25-29	1	2,271	37,471	37,559	2,963	212	26	1	3	80,507	
30-34	2	383	7,989	28,133	16,463	1,469	91	4	1	54,535	
35-39	1	80	1,451	6,355	11,876	6,181	539	7	3	26,493	
40-44	..	33	352	1,525	3,484	4,868	1,824	49	1	12,136	
45-49	1	17	93	338	788	1,423	1,153	126	..	3,939	
50-54	..	3	37	92	168	266	267	56	1	890	
55-59	..	4	17	31	65	84	100	21	1	323	
60-64	..	1	8	14	19	25	22	4	..	93	
65 and over(a)	..	14	34	25	29	23	15	2	12	154	
Total nuptial	11	19,208	82,423	77,089	36,014	14,564	4,037	271	22	233,639	
Total ex-nuptial	147	8,144	6,983	2,963	1,640	919	337	21	17	21,171	
Total	158	27,352	89,406	80,052	37,654	15,483	4,374	292	39	254,810	

(a) Includes 113 confinements in which the age of the father was not stated.

**Confinements—relative countries of birth of parents**

The following table shows the relative countries of birth of parents of children whose births from nuptial confinements were registered during 1970.

**NUPTIAL CONFINEMENTS, BY RELATIVE COUNTRIES OF BIRTH OF PARENTS  
AUSTRALIA, 1970**

Country of birth of father	Country of birth of mother											Total fathers
	Australia	New Zealand	United Kingdom and Ireland	Germany	Greece	Italy	Malta	Netherlands	Yugoslavia	Other European	Other and unspecified	
Australia . . . . .	150,669	846	7,797	1,330	148	463	379	1,354	113	706	1,558	165,363
New Zealand . . . . .	957	529	109	12	..	3	3	14	..	8	31	1,666
United Kingdom and Ireland . . . . .	9,641	188	9,090	215	15	48	81	217	17	156	402	20,070
Germany . . . . .	1,814	30	280	838	7	26	18	81	28	157	88	3,367
Greece . . . . .	390	3	33	16	7,572	19	8	14	17	35	186	8,293
Italy . . . . .	2,105	17	225	82	45	8,846	55	75	58	123	114	11,745
Malta . . . . .	616	5	105	13	6	17	1,608	23	..	12	28	2,433
Netherlands . . . . .	1,998	20	254	73	7	10	23	1,258	7	47	93	3,790
Yugoslavia . . . . .	680	11	108	118	68	100	18	41	3,266	112	47	4,569
Other European . . . . .	1,726	37	285	333	60	53	14	79	92	2,063	182	4,924
Other and unspecified . . . . .	2,203	53	394	85	164	73	31	99	15	135	4,167	7,419
Total mothers	172,799	1,739	18,680	3,115	8,092	9,658	2,238	3,255	3,613	3,554	6,896	233,639

**Confinements—age, duration of marriage and issue of mothers**

The total number of nuptial confinements resulting in live births in 1970 was 233,639, comprising 231,094 single births, 2,520 cases of twins, 23 cases of triplets, and two cases of quadruplets. The following tables relating to previous issue exclude the issue of former marriages and stillborn children. On the other hand, they include in some States children by the same father who were born to the mother prior to the marriage. Children born at the present confinement are included in the calculation of average issue shown.

The following table shows that in 1970 the average size of family increased fairly regularly with the duration of the marriage. However, the average issue relates only to those women who gave birth in 1970. The table should not be interpreted to mean that, for example, *all* women who have been married for over ten years have an average of more than four children or those married twenty years, six children. The average issue of all married mothers who bore children in 1970 was 2.27 compared with 2.30 in 1969, 2.34 in 1968, 2.38 in 1967, and 2.42 in 1966.

**NUPTIAL CONFINEMENTS BY DURATION OF MARRIAGE, AND AVERAGE ISSUE OF  
MOTHERS: AUSTRALIA, 1970**

Duration of marriage	Total nuptial confinements	Average issue of mother	Duration of marriage	Total nuptial confinements	Average issue of mother
Under 1 year . . . . .	32,592	1.03	15 years . . . . .	2,163	4.96
1 year . . . . .	27,492	1.24	16 " . . . . .	1,599	5.25
2 years . . . . .	30,044	1.58	17 " . . . . .	1,281	5.48
3 " . . . . .	27,663	1.83	18 " . . . . .	1,039	5.62
4 " . . . . .	23,717	2.11	19 " . . . . .	856	5.94
5 " . . . . .	19,400	2.41	20 " . . . . .	593	6.02
6 " . . . . .	14,787	2.72	21 " . . . . .	426	6.44
7 " . . . . .	11,799	3.02	22 " . . . . .	295	6.68
8 " . . . . .	8,909	3.30	23 " . . . . .	165	6.81
9 " . . . . .	7,408	3.56	24 " . . . . .	96	7.19
10 " . . . . .	6,062	3.78	25 years and over . . . . .	122	7.90
11 " . . . . .	4,723	3.98	Not stated . . . . .	709	3.84
12 " . . . . .	3,854	4.22			
13 " . . . . .	3,178	4.44			
14 " . . . . .	2,667	4.73	Total . . . . .	233,639	2.27



**NUPTIAL CONFINEMENTS, BY AGE OF MOTHER AND PREVIOUS ISSUE  
AUSTRALIA, 1970**

Previous issue	Age of mother (years)							45 and over	Not stated	Total married mothers
	Under 20	20-24	25-29	30-34	35-39	40-44				
0 . . . . .	15,866	43,600	21,810	5,187	1,555	368	19	7	88,412	
1 . . . . .	3,054	28,018	27,680	8,407	2,142	443	22	6	69,772	
2 . . . . .	280	8,417	17,541	9,594	2,839	560	28	3	39,262	
3 . . . . .	17	1,910	6,683	6,679	2,792	645	33	5	18,764	
4 . . . . .	2	395	2,249	3,269	2,004	604	33	1	8,557	
5 . . . . .	..	70	759	1,567	1,275	429	27	..	4,127	
6 . . . . .	..	11	259	724	823	319	31	..	2,167	
7 . . . . .	..	1	85	351	476	243	18	..	1,174	
8 . . . . .	..	1	14	142	305	159	12	..	633	
9 . . . . .	..	..	6	54	160	104	12	..	336	
10 and over . . . . .	..	..	3	40	193	163	36	..	435	
Total married mothers . . . . .	19,219	82,423	77,089	36,014	14,564	4,037	271	22	233,639	

**Multiple births—previous issue of mothers**

Of married mothers of twins in 1970, 792 had no previous issue either living or dead, 702 had one child previously, 489 had two previous issue, 252 three, 145 four, 67 five, 26 six, 29 seven, 11 eight, 1 ten, 5 eleven, and 1 fourteen. Of the 23 cases of nuptial triplets, and two cases of quadruplets registered during 1970, 8 mothers had no previous issue, 6 had one, 7 had two, 1 had three, 1 had four, 1 had five and 1 had nine previous issue.

**Nuptial first births**

A nuptial first birth is defined as the first birth to the existing marriage. About two-thirds of first births occur to women aged under 25, and over half occur within the first two years of marriage, (36 per cent in the first and 24 per cent in the second year).

The following table shows the number of nuptial first births classified by grouped ages of mothers and grouped durations of marriage of mothers.

**NUPTIAL FIRST BIRTHS, BY AGE OF MOTHER AND DURATION OF MARRIAGE  
AUSTRALIA, 1970**

		Age of mother (years)								
Duration of marriage		Under 20	20-24	25-29	30-34	35-39	40-44	45 and over	Not stated	Total
Under 8 months	.	11,678	8,639	1,263	357	142	39	1	..	22,119
8 months	.	354	890	270	106	26	4	..	..	1,650
9	.	442	1,698	565	200	76	19	1	..	3,001
10	.	431	1,540	488	186	47	6	1	..	2,699
11	.	410	1,490	448	129	48	8	..	..	2,533
Total under 1 year		13,315	14,257	3,034	978	339	76	3	..	32,002
1 year and under	2 years	2,080	13,692	4,147	1,114	322	80	3	1	21,439
2 years	"	333	8,959	4,067	705	171	50	4	1	14,290
3	"	65	4,422	3,842	455	133	34	3	..	8,954
4	"	2	1,623	2,987	403	80	15	1	..	5,111
5	"	2	607	3,646	1,103	231	49	2	1	5,641
10	"	..	2	81	395	186	30	2	1	697
15 years and over	"	..	..	1	31	91	33	1	..	157
Not stated	.	69	38	5	3	2	1	..	3	121
Total	.	15,866	43,600	21,810	5,187	1,555	368	19	7	88,412

The following table provides a comparison between the numbers of nuptial first births and subsequent births in periods since 1946 and shows also the proportion of first to total nuptial confinements.

**NUPTIAL FIRST BIRTHS AND SUBSEQUENT BIRTHS(a)  
AUSTRALIA, 1946 TO 1970**

Period	Nuptial confinements			Proportion of first to total nuptial confinements (per cent)
	First births	Other births	Total	
Annual average—				
1946-50 . . .	63,413	109,044	172,457	36.77
1951-55 . . .	63,062	128,176	191,238	32.98
1956-60 . . .	65,695	144,352	210,047	31.28
1961-65 . . .	69,280	147,549	216,829	31.95
1966-70 . . .	81,103	138,000	219,103	37.02
Annual total—				
1966 . . .	73,986	130,808	204,794	36.13
1967 . . .	76,127	133,302	209,429	36.35
1968 . . .	81,341	138,124	219,465	37.06
1969 . . .	85,650	142,539	228,189	37.53
1970 . . .	88,412	145,227	233,639	37.84

(a) Excludes particulars of full-blood Aborigines before 1966.

### Stillbirths

Interstate comparison of the figures and rates in the following tables are affected by the differences in the definitions adopted by the various States and only the trends in the rates for each State should be compared. Beginning in 1964, steps were taken to amend the States' registration laws and so make uniform the criteria whereby stillbirths are registered. The amended legislation provides for all foetal deaths of at least twenty weeks' gestation (or 400 grammes weight) to be registered. The dates on which the legislation came into effect for each State are as follows: New South Wales, January 1969; Victoria, May 1971; Queensland, October 1967; South Australia, January 1968; Western Australia, January 1968; Tasmania, March 1967; Northern Territory, September 1964; Australian Capital Territory, September 1969. Prior to these dates the statistics of stillbirths shown relate to those in several States of at least seven months gestation and in other States to those of at least twenty-eight weeks' gestation. So as to preserve as much comparability as possible with figures for earlier years the figures shown for each State since the amended legislation relate to stillbirths of at least twenty-eight weeks' gestation.

**STILLBIRTHS(a): STATES AND TERRITORIES, 1946 TO 1970**

<i>Period</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<i>Annual average—</i>									
1946-50 . . .	1,405	949	626	368	274	161	n.a.	12	(b)3,795
1951-55 . . .	1,239	849	581	290	271	139	8	16	3,393
1956-60 . . .	1,253	839	558	274	235	109	6	19	3,293
1961-65 . . .	1,104	794	468	264	194	87	17	18	2,946
1966-70 . . .	876	767	361	215	192	86	(c)39	27	2,563
<i>Annual total—</i>									
1966 . . .	964	762	407	237	174	111	(c)44	31	2,730
1967 . . .	863	797	372	211	188	83	(c)49	24	2,587
1968 . . .	806	734	365	217	183	79	(c)39	26	2,449
1969 . . .	857	761	350	208	203	79	(c)35	26	2,519
1970 . . .	888	782	312	200	211	80	(c)30	29	2,532

(a) Excludes particulars of full-blood Aborigines before 1966. (b) Excludes Northern Territory. (c) Figures from 1966 include foetal deaths occurring in remote localities for which the period of gestation was not known. The numbers of such cases were: 1966, 18; 1967, 25; 1968, 13; 1969, 13; 1970, 14. The Registration Ordinance requires registration of any foetal death of at least twenty weeks' gestation.

## PROPORTION OF STILLBIRTHS(a): STATES AND TERRITORIES, 1946 TO 1970

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Average annual rate—									
1946-50 . . .	20.0	19.6	21.9	22.1	20.5	22.3	n.a.	16.3	(b)20.5
1951-55 . . .	16.5	15.5	18.4	15.8	17.0	17.5	17.2	17.1	16.6
1956-60 . . .	15.5	13.5	16.1	13.5	13.7	12.6	8.6	14.3	14.6
1961-65 . . .	13.1	12.0	13.1	12.2	11.4	10.2	18.4	9.3	12.5
1966-70 . . .	10.5	11.0	10.1	10.0	9.8	10.7	18.3	9.7	10.6
Annual rate—									
1966 . . .	12.2	11.8	12.2	11.5	10.0	14.8	24.3	13.2	12.1
1967 . . .	10.8	12.0	10.6	10.2	10.3	10.9	24.9	9.9	11.2
1968 . . .	9.8	10.3	10.3	10.1	9.3	9.4	18.4	9.7	10.1
1969 . . .	9.9	10.6	9.5	9.4	9.7	9.3	15.2	8.4	10.0
1970 . . .	9.9	10.6	8.2	8.8	9.7	9.7	11.3	8.3	9.7

(a) Number of stillbirths per 1,000 of all births (live and still). Excludes particulars of full-blood Aborigines before 1966. (b) Excludes Northern Territory.

NOTE. Because of the smallness of the numbers of stillbirths occurring in the Australian Capital Territory and the Northern Territory the rates for these Territories are subject to considerable fluctuation.

## Mortality

This section contains statistics of general mortality and infant mortality. Statistics of foetal deaths (stillbirths) are shown separately in the preceding section. For the registration of a death the period allowed is 8 days in Tasmania, 14 days in South Australia, Western Australia, Australian Capital Territory, and Northern Territory, 21 days in Victoria, and 30 days in New South Wales and Queensland.

## Number of deaths

The following table shows the number of deaths registered in each State and Territory for years commencing 1946. Stillbirths, although registered as both births and deaths in some States are excluded from the death statistics.

## DEATHS(a): STATES AND TERRITORIES, 1946 TO 1971

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Annual average—									
1946-50(b) . . .	29,552	21,827	10,357	6,507	4,802	2,459	76	103	75,683
1951-55 . . .	32,135	22,900	11,187	7,182	5,263	2,576	109	131	81,483
1956-60 . . .	34,002	24,254	12,008	7,732	5,523	2,668	117	184	86,488
1961-65 . . .	37,514	26,569	13,570	8,388	6,043	2,939	152	290	95,465
1966-70 . . .	41,249	29,265	15,711	9,562	7,208	3,231	540	497	107,263
Annual total—									
1967 . . .	39,613	28,373	14,736	9,071	6,779	3,228	527	376	102,703
1968 . . .	41,803	29,967	16,078	9,916	7,468	3,284	543	488	109,547
1969 . . .	40,665	28,976	15,786	9,337	7,350	3,309	485	588	106,496
1970 . . .	43,601	30,335	17,055	10,138	7,543	3,174	608	594	113,048
1971—									
Males . . .	22,603	16,762	9,355	5,310	4,536	1,805	388	349	61,108
Females . . .	19,088	13,883	6,984	4,376	3,270	1,490	249	249	49,589
Persons . . .	41,691	30,645	16,339	9,686	7,806	3,295	637	598	110,697

(a) Excludes particulars of full-blood Aborigines before 1966. (b) Excludes deaths of defence personnel and of internees and prisoners of war from overseas for the period September 1939 to June 1947.

NOTE. Annual averages for each five-year period from 1861 to 1950 were published in Year Book No. 39, page 597.



### Crude death rates

The simplest method of measuring mortality is to relate the number of deaths for a given period to the mean population for that period, which gives the crude death rate. This rate for a given period measures the number per thousand of population by which the population is depleted through deaths during that period.

#### CRUDE DEATH RATES(a): STATES AND TERRITORIES, 1946 TO 1971

<i>Period</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Average annual rate—									
1946–50(b)	9.70	10.37	9.13	9.76	9.23	9.30	6.27	5.31	9.74
1951–55	9.49	9.55	8.71	9.25	8.49	8.48	6.86	4.58	9.25
1956–60	9.20	8.91	8.36	8.62	7.90	7.97	5.32	4.31	8.78
1961–65	9.27	8.73	8.63	8.28	7.78	8.15	4.95	3.94	8.75
1966–70	9.44	8.79	9.07	8.50	7.86	8.51	8.01	4.40	8.91
Annual rate—									
1967	9.22	8.66	8.67	8.17	7.71	8.60	8.53	3.63	8.70
1968	9.59	9.01	9.30	8.83	8.17	8.65	8.08	4.35	9.12
1969	9.16	8.56	8.96	8.19	7.71	8.60	6.68	4.83	8.69
1970	9.64	8.80	9.52	8.76	7.61	8.19	7.73	4.51	9.04
1971—									
Males	9.80	9.56	10.15	9.04	8.60	9.18	8.07	4.74	9.53
Females	8.32	7.93	7.72	7.44	6.53	7.68	6.65	3.54	7.82
Persons	9.06	8.75	8.94	8.24	7.59	8.43	7.45	4.15	8.68

(a) Number of deaths per 1,000 of mean population. Excludes particulars of full-blood Aborigines before 1966.  
 (b) Excludes deaths of defence personnel, etc., from September 1939 to June 1947.

A graph showing the crude death rate for each year from 1870 to 1971 is shown on plate 20 page 167.

The crude death rate is affected by the particular sex and age composition of the population. While it is an element in the rate of natural increase of the population it cannot validly be used to compare the relative incidence of mortality in different populations. The crude death rate will tend to be low if the community contains a large proportion of young people and high if the population is elderly. Age specific death rates and true death rates are a guide to comparative mortality.

### True death rates

A correct measurement of the mortality of the population can be obtained from life tables. A life table represents the number of survivors at each age from a group of newly-born children who are subject to given mortality conditions, and from such a table the complete expectation of life at birth can be calculated. The reciprocal of this figure is known as the true death rate, since, if the complete expectation of life of a person at birth is fifty years, say, then each person will on the average die fifty years after birth, so that in a stationary population one person in fifty or twenty per thousand, will die each year. The true death rate for a given period is unaffected by the particular age distribution of that period and is determined solely by the mortality experience of the period as manifested in the rate of survival from each year of age to the next. The next table sets out true death rates for the periods covered by Australian life tables together with estimates for recent years based on abridged life tables calculated by the Commonwealth Statistician. These estimates are subject to revision when the Australian life tables 1965–1967 become available.

**TRUE DEATH RATES: AUSTRALIA**  
1946-48 TO 1970(d)

Period	True death rate	
	Males(b)	Females(c)
1946-48 . . .	15.14	14.16
1953-55 . . .	14.89	13.75
1960-62 . . .	14.72	13.48
1966(d) . . .	14.80	13.51
1967(d) . . .	14.76	13.43
1968(d) . . .	14.83	13.50
1969(d) . . .	14.81	13.41
1970(d) . . .	14.82	13.47

(a) Excludes particulars of full-blood Aborigines before 1966. (b) Number of deaths per 1,000 males in stationary population. (c) Number of deaths per 1,000 females in stationary population. (d) Based on abridged life tables calculated by the Commonwealth Statistician.

The crude death rates and the true death rates of Australia and the more populous countries of the world for the latest available year are shown in the table in International Vital Statistics at the end of this chapter.

#### Australian Life Tables

*Life Tables prior to 1961.* It has been the practice at each census from 1911 onwards to prepare Life Tables representative of the mortality experience of Australia. The mortality of the Australian population for the thirty years from 1881 to 1910 inclusive was investigated in 1911 by the Commonwealth Statistician. Tables were compiled for each State and for Australia as a whole in respect of each sex for each of the decennial periods 1881-90, 1891-1900 and 1901-10. These compilations furnished a comprehensive view of Australian mortality in respect of sex, time, and geographical distribution, and practically superseded all Life Tables prepared in Australia prior to 1911. In addition, mortality tables based on the experience for the whole of Australia for the ten years 1901-10 were prepared and published. At the census of 1921 Life Tables were prepared by the Commonwealth Statistician from the recorded census population and the deaths in the three years 1920 to 1922. In 1933, 1947 and 1954, Life Tables based on the census population and the deaths in the years 1932 to 1934, 1946 to 1948 and 1953 to 1955 respectively were compiled by the Commonwealth Actuary.

*Life Tables of Census of 1961.* On the occasion of the 1961 Census the eighth Life Tables in the series were compiled by the Commonwealth Actuary. These were based on the population recorded at the census, adjusted to allow for variation in the net movement into Australia over the years 1960 to 1962, and deaths during these years. Full particulars of the data used, the method of construction and the tabulation of these Life Tables will be found in the report of the Commonwealth Actuary, which was published by the Commonwealth Statistician in 1966. This report also appears in Volume VIII of the detailed tables of the 1961 Census. The main features of the tables, including comparisons with earlier Australian tables, are set out in the Year Book No. 55, pages 186 and 187. The table most frequently used by the general reader is that relating to expectation of life, and is published below.

#### COMPLETE EXPECTATION OF LIFE ( $e_x^0$ ) AT SELECTED AGES

Age (x)	Males				Females			
	1901-10	1946-48	1953-55	1960-62	1901-10	1946-48	1953-55	1960-62
0 . . .	55.20	66.07	67.14	67.92	58.84	70.63	72.75	74.18
10 . . .	53.53	59.04	59.53	59.93	56.38	63.11	64.78	65.92
20 . . .	44.74	49.64	50.10	50.40	47.52	53.47	55.06	56.16
30 . . .	36.52	40.40	40.90	41.12	39.33	44.08	45.43	46.49
40 . . .	28.56	31.23	31.65	31.84	31.47	34.91	35.99	36.99
50 . . .	21.16	22.67	22.92	23.13	23.69	26.14	27.03	27.92
60 . . .	14.35	15.36	15.47	15.60	16.20	18.11	18.78	19.51
70 . . .	8.67	9.55	9.59	9.77	9.96	11.14	11.62	12.19
80 . . .	4.96	5.36	5.47	5.57	5.73	6.02	6.30	6.68

NOTE.  $e_x^0$  = complete expectation of life at specified ages.

The progress towards lower mortality rates for both males and females has continued over the past sixty years or more. For example, the probability of a child born in 1961 dying in one year is less than one-quarter of the probability of death in one year attached to the child who was born sixty years before. Even at advanced ages, the reductions which have occurred in mortality rates as compared with sixty years ago are very substantial. With the exception of males of ages forty to forty-seven and ages sixty-two to sixty-six lower mortality rates were experienced by males and females during 1960 to 1962 than for the period 1953 to 1955. There is evidence that female longevity continues to increase at a faster rate than male longevity.

#### Age distribution at death

Age at death is recorded for statistical purposes in days for the first week of life, in weeks for the first four weeks, in months for the first year and in completed years of life thereafter. These ages are usually combined in groups for publication, the most common being weeks for the first four weeks, months or groups of months for the first year, single years of age for the first five years, and thereafter the five-year groups 5-9 years, 10-14 years, etc. A summary in this form for the year 1970 is given for Australia in the following table.

#### DEATHS, BY AGE AT DEATH AND SEX: AUSTRALIA, 1970

Age at death	Males	Fe- males	Per- sons	Age at death	Males	Fe- males	Per- sons
Under 1 week . . . . .	1,825	1,182	3,007	5-9 years . . . . .	298	204	502
1 week and under 2 weeks . . . . .	88	72	160	10-14 " . . . . .	241	189	430
2 weeks and under 3 weeks . . . . .	54	36	90	15-19 " . . . . .	855	316	1,171
3 weeks and under 4 weeks . . . . .	33	38	71	20-24 " . . . . .	1,035	293	1,328
<i>Total under 4 weeks . . . . .</i>	<i>2,000</i>	<i>1,328</i>	<i>3,328</i>	25-29 " . . . . .	654	297	951
4 weeks and under 3 months . . . . .	277	182	459	30-34 " . . . . .	622	348	970
3 months and under 6 months . . . . .	253	201	454	35-39 " . . . . .	898	590	1,488
6 months and under 12 months . . . . .	188	175	363	40-44 " . . . . .	1,490	874	2,364
<i>Total under 1 year . . . . .</i>	<i>2,718</i>	<i>1,886</i>	<i>4,604</i>	45-49 " . . . . .	2,433	1,374	3,807
1 year . . . . .	204	153	357	50-54 " . . . . .	3,372	1,856	5,228
2 years . . . . .	129	92	221	55-59 " . . . . .	5,215	2,629	7,844
3 " . . . . .	105	61	166	60-64 " . . . . .	6,674	3,470	10,144
4 " . . . . .	77	61	138	65-69 " . . . . .	8,116	4,523	12,639
<i>Total under 5 years . . . . .</i>	<i>3,233</i>	<i>2,253</i>	<i>5,486</i>	70-74 " . . . . .	8,066	6,360	14,426
				75-79 " . . . . .	8,212	7,952	16,164
				80-84 " . . . . .	6,530	8,100	14,630
				85 years and over . . . . .	4,877	8,589	13,466
				Age not stated . . . . .	7	3	10
				<i>Total all ages . . . . .</i>	<i>62,828</i>	<i>50,220</i>	<i>113,048</i>

There are different mortality rates at various stages of life, and the actual number of deaths in any period is related to the numbers living at the respective stages. Changes in the number of deaths from one period to another are associated with changes in the rate of mortality in the various age groups and by the changed proportions of persons living in the different groups. The combined effect of various influences, i.e. the decline in the rate of mortality, the long term decline in the birthrate, and the effects of past and present migration on the age distribution of the population, is shown in the following table, which shows the proportion of deaths in various age groups in five-year periods from 1946 to 1970 and for the year 1970.

#### PROPORTION OF DEATHS IN EACH AGE GROUP: AUSTRALIA, 1946 TO 1970(a) (Per cent)

Age at death (years)						1970		
	1946-50	1951-55	1956-60	1961-65	1966-70	Males	Females	Persons
Under 1 year . . . . .	6.48	5.77	5.41	4.74	4.06	4.32	3.76	4.07
1-4 years . . . . .	1.46	1.48	1.19	0.96	0.81	0.82	0.73	0.78
5-19 " . . . . .	1.89	1.85	1.76	1.76	1.83	2.22	1.41	1.86
20-39 " . . . . .	5.69	5.18	4.64	4.26	4.12	5.11	3.04	4.19
40-59 " . . . . .	18.72	17.54	17.02	17.28	17.37	19.92	13.41	17.02
60-64 " . . . . .	9.61	9.63	8.75	8.74	8.87	10.62	6.91	8.97
65 and over . . . . .	56.12	58.52	61.20	62.24	62.92	56.98	70.73	63.10
Age not stated . . . . .	0.03	0.03	0.03	0.02	0.02	0.01	0.01	0.01
<i>Total . . . . .</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>

(a) Excludes particulars of full-blood Aborigines before 1966.



A table showing these proportions for males and females separately for the period 1901 to 1950 was published in Year Book No. 39, page 614.

### Age-specific death rates

In previous issues of the Year Book, average annual age-specific death rates, i.e. the average number of deaths per 1,000 of population in each age group, were given for each State and Australia for the periods 1932-1934, 1946-1948, 1953-1955, 1960-1962 and 1965-1967 (*see* Year Books, No. 37, pp. 778-9, No. 39, pp. 615-6, No. 44, pp. 640-1, No. 52, p. 253, and No. 55, p. 189). These rates were based on the age distribution of the population at the relevant censuses.

### AGE-SPECIFIC DEATH RATES(a): STATES, 1970

Age group (years)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.(b)
MALES							
Under 1(c)	23.60	16.20	20.96	19.56	22.29	15.60	20.60
1-4	0.99	0.91	1.12	0.98	1.62	1.02	1.07
5-9	0.49	0.41	0.46	0.49	0.65	0.37	0.47
10-14	0.36	0.33	0.49	0.39	0.36	0.95	0.39
15-19	1.53	1.39	1.49	1.48	1.52	2.15	1.50
20-24	1.89	1.69	2.05	1.52	2.11	1.78	1.86
25-29	1.46	1.24	1.49	1.09	1.58	2.08	1.42
30-34	1.58	1.46	1.66	1.39	1.48	1.46	1.55
35-39	2.45	2.23	2.71	2.21	2.15	2.50	2.39
40-44	3.81	3.25	4.44	3.36	3.18	3.66	3.65
45-49	6.11	5.91	7.04	5.88	6.33	5.68	6.19
50-54	17.06	9.83	11.18	10.50	9.25	9.33	10.51
55-59	18.24	15.78	18.66	16.72	14.56	15.88	17.17
60-64	29.12	26.03	28.71	26.29	24.69	24.83	27.47
65-69	48.52	44.87	46.14	42.89	43.89	41.21	46.06
70-74	69.97	65.57	60.92	67.63	57.35	60.60	65.93
75-79	111.83	110.36	102.18	101.25	99.24	105.09	107.79
80-84	159.30	152.75	144.72	143.12	149.15	146.96	152.56
85 and over	275.36	275.97	242.54	233.44	272.43	228.90	264.16
FEMALES							
Under 1(c)	15.64	12.76	14.67	12.75	20.10	12.65	15.02
1-4	0.77	0.69	0.98	0.64	0.85	0.60	0.80
5-9	0.30	0.36	0.41	0.29	0.37	0.29	0.34
10-14	0.30	0.34	0.40	0.41	0.17	0.35	0.33
15-19	0.57	0.53	0.78	0.55	0.46	0.60	0.58
20-24	0.60	0.55	0.61	0.38	0.52	0.37	0.56
25-29	0.68	0.73	0.80	0.53	0.57	0.65	0.70
30-34	1.03	0.71	1.07	0.88	0.80	1.08	0.93
35-39	1.73	1.46	2.30	1.42	1.24	1.26	1.68
40-44	2.55	1.98	2.71	2.08	2.11	1.73	2.32
45-49	3.93	3.45	4.07	3.18	2.89	2.46	3.63
50-54	6.11	5.30	6.96	4.49	4.42	6.67	5.80
55-59	9.24	8.05	9.24	7.23	7.17	8.08	8.58
60-64	15.17	12.96	14.41	14.19	11.81	12.86	14.05
65-69	23.59	22.67	20.95	22.58	19.70	25.24	22.62
70-74	39.10	36.91	36.48	35.14	38.66	36.77	37.67
75-79	64.02	63.68	63.24	62.62	54.89	60.50	62.98
80-84	107.54	109.37	105.89	107.80	95.47	82.74	106.47
85 and over	220.95	211.48	202.67	195.17	202.05	219.78	211.44

(a) Number of deaths per 1,000 of population in each age group at 30 June 1970. The age-specific rates are subject to revision when the age distribution of population is obtained from the results of the 1971 Population Census. (b) Includes the Australian Capital Territory and the Northern Territory. (c) Infant deaths per 1,000 live births registered.

## AGE-SPECIFIC DEATH RATES(a): AUSTRALIA, 1946 TO 1970(b)

Age group (years)	1946-48 (c)	1953-55 (c)	1960-62 (c)	1965-67 (c)	1966	1967	1968	1969	1970
MALES									
Under 1(d)	31.71	25.18	22.36	20.85	20.88	20.57	19.83	20.14	20.60
1-4	2.09	1.69	1.15	1.08	1.18	0.97	0.95	0.95	1.07
5-9	0.92	0.67	0.52	0.45	0.47	0.44	0.47	0.48	0.47
10-14	0.77	0.63	0.48	0.46	0.46	0.42	0.50	0.48	0.39
15-19	1.41	1.51	1.23	1.33	1.37	1.30	1.46	1.32	1.50
20-24	1.73	1.82	1.62	1.67	1.67	1.69	1.78	1.69	1.86
25-29	1.69	1.68	1.49	1.48	1.43	1.52	1.42	1.48	1.42
30-34	2.02	1.79	1.69	1.64	1.62	1.64	1.58	1.64	1.55
35-39	2.66	2.40	2.26	2.45	2.51	2.31	2.36	2.36	2.39
40-44	4.12	3.64	3.67	3.82	3.78	3.90	3.74	3.75	3.65
45-49	6.86	6.01	5.96	6.14	6.01	6.28	6.12	6.42	6.19
50-54	11.39	10.44	10.01	10.45	10.39	10.08	10.55	10.23	10.51
55-59	17.58	17.03	16.57	16.96	16.88	17.12	17.27	16.88	17.17
60-64	27.43	26.58	26.44	27.59	27.83	27.27	28.61	27.07	27.47
65-69	42.42	41.28	41.68	43.66	44.15	43.69	44.53	44.40	46.06
70-74	63.69	64.53	63.04	66.84	67.73	65.82	67.19	63.54	65.93
75-79	99.65	98.77	94.43	99.77	102.41	97.59	104.05	101.76	107.79
80-84	149.31	145.88	141.83	146.95	151.58	145.35	159.31	140.58	152.56
85 and over	253.48	248.14	243.69	241.98	251.13	230.93	272.38	251.88	264.16
FEMALES									
Under 1(d)	24.96	19.88	17.57	16.35	16.45	15.82	15.61	15.57	15.02
1-4	1.72	1.35	1.08	1.14	0.81	0.85	0.86	0.87	0.80
5-9	0.64	0.50	0.38	0.34	0.36	0.32	0.36	0.36	0.34
10-14	0.52	0.37	0.29	0.27	0.26	0.24	0.26	0.25	0.33
15-19	0.70	0.58	0.50	0.54	0.56	0.51	0.56	0.58	0.58
20-24	1.08	0.67	0.60	0.63	0.65	0.61	0.57	0.54	0.56
25-29	1.50	0.83	0.71	0.72	0.70	0.70	0.61	0.68	0.70
30-34	1.77	1.11	0.95	0.98	1.03	0.90	0.97	0.79	0.93
35-39	2.42	1.74	1.47	1.54	1.65	1.34	1.53	1.38	1.68
40-44	3.31	2.55	2.26	2.31	2.22	2.38	2.36	2.24	2.32
45-49	4.92	4.19	3.65	3.86	3.76	3.79	3.68	3.51	3.63
50-54	7.63	6.43	5.55	5.87	6.03	5.90	5.68	5.85	5.80
55-59	10.46	9.25	8.14	8.67	8.85	8.60	8.72	8.31	8.58
60-64	16.52	14.75	13.31	13.56	13.60	13.51	13.82	13.24	14.05
65-69	26.17	23.89	21.99	21.94	22.79	21.13	22.36	22.16	22.62
70-74	45.84	40.93	37.14	37.47	38.39	36.40	36.50	34.65	37.67
75-79	75.14	69.72	63.18	62.37	64.58	60.52	64.52	61.37	62.98
80-84	123.46	117.36	105.10	107.93	110.56	104.26	108.41	98.51	106.47
85 and over	222.12	213.69	210.20	119.73	204.47	195.24	224.05	201.50	211.44

(a) Number of deaths per 1,000 of population of the same age group and sex. The populations used in the calculation of these rates are based on census populations at 30 June 1947, 1954, 1961 and 1966, and the estimated populations at 30 June 1967, 1968, 1969 and 1970. The age-specific rates for the years 1967 to 1970 are subject to revision when the age distribution of population is obtained from the results of the 1971 Population Census. (b) Excludes particulars of full-blood Aborigines prior to 1965. (c) Average annual rate per 1,000 of census population, based on deaths in the three year period, i.e. census year and the years preceding and following it. (d) Infant deaths per 1,000 live births registered.

**Infant deaths and death rates—States and Territories**

The next table shows for each State and Territory, for the period 1946 to 1971, the number of deaths under one year of age and the rates of infant mortality under one year. Rates for Australia and the more populous countries of the world for the latest available year are shown in the table International Vital Statistics at the end of this Chapter.

**INFANT MORTALITY UNDER ONE YEAR(a): STATES AND TERRITORIES, 1946 TO 1971**

<i>Period</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>Annual average—</b>									
1946-50 . . .	1,990	1,129	770	431	370	187	11	14	4,902
1951-55 . . .	1,852	1,113	730	407	384	184	17	14	4,701
1956-60 . . .	1,770	1,205	717	410	362	176	25	18	4,683
1961-65 . . .	1,685	1,168	696	407	350	156	28	34	4,524
1966-70 . . .	1,567	1,071	669	354	393	127	117	51	4,349
<b>Annual total—</b>									
1967 . . .	1,452	1,101	678	346	314	130	122	44	4,187
1968 . . .	1,525	1,010	716	345	398	143	101	45	4,283
1969 . . .	1,625	1,066	691	347	453	139	103	58	4,482
1970 . . .	1,743	1,060	672	367	459	116	126	61	4,604
1971 . . .	1,710	1,154	766	366	464	114	170	80	4,824
<b>Annual average rate(b)—</b>									
1946-50 . . .	28.91	23.82	27.49	26.50	28.15	26.53	37.37	19.89	26.98
1951-55 . . .	25.11	20.70	23.58	22.55	24.41	23.67	36.28	15.40	23.34
1956-60 . . .	22.24	19.67	20.99	20.50	21.42	20.62	36.00	13.68	21.05
1961-65 . . .	20.32	17.92	19.69	19.07	20.73	18.46	30.76	17.80	19.42
1966-70 . . .	18.99	15.57	18.90	16.60	20.25	15.94	54.91	18.25	18.10
<b>Annual rate(b)—</b>									
1967 . . .	18.42	16.81	19.54	16.97	17.42	17.23	63.51	18.33	18.26
1968 . . .	18.67	14.38	20.35	16.27	20.37	17.19	48.46	17.03	17.78
1969 . . .	18.89	15.01	18.89	15.79	21.83	16.46	45.29	18.84	17.92
1970 . . .	19.71	14.52	17.91	16.23	21.23	14.17	48.02	17.55	17.88
1971 . . .	17.37	15.29	19.16	15.92	19.14	13.70	60.03	19.80	17.46

(a) Excludes particulars of full-blood Aborigines before 1966. (b) Number of deaths of children aged under one year per 1,000 live births registered.

Because of the smallness of the numbers of these deaths occurring in the Australian Capital Territory and the Northern Territory, the rates for these Territories (i.e. number of such deaths per thousand live births) are subject to considerable fluctuation.

**Infant deaths and death rates—Australia**

The fact that out of 616,628 male infants born from 1966 to 1970, 12,578 (20.40 per 1,000) died during the first year of life, while of 584,997 female infants only 9,168 (15.67 per 1,000) died during the first year, accords with the universal experience that during the first few years of life the higher death rate of male infants tends to counteract the excess of male births. Stillbirths, for which masculinity is also higher, are not included in any of the tables relating to deaths.

As shown by the following table, the disparity is greater during the first four weeks of life, termed the neonatal period, than during the remainder of the first year of life, or the post-neonatal period.



## INFANT DEATHS AND MORTALITY RATES(a): AUSTRALIA, 1946 TO 1970

Period	Age at death											Total under one year		
	Days		Total under one week	Weeks			Total under four weeks	Months						
	Under 1	1-6		1	2	3		1-2 (b)	3-5	6-8	9-11			
Annual average—														
1946-50 . . .	1,717	1,297	3,014	259	138	103	3,514	404	415	318	251	2,808	2,094	4,902
1951-55 . . .	1,631	1,250	2,881	237	109	86	3,313	396	431	316	245	2,683	2,018	4,701
1956-60 . . .	1,737	1,195	2,932	221	116	84	3,353	398	457	271	204	2,662	2,021	4,683
1961-65 . . .	1,709	1,187	2,896	191	102	71	3,260	426	417	245	176	2,596	1,928	4,524
1966-70 . . .	1,696	1,125	2,821	160	88	72	3,141	407	420	226	155	2,515	1,834	4,349
Annual total—														
1966 . . .	1,528	1,131	2,659	171	80	70	2,980	374	427	240	169	2,403	1,787	4,190
1967 . . .	1,572	1,144	2,716	169	91	77	3,053	385	390	215	144	2,421	1,766	4,187
1968 . . .	1,768	1,050	2,818	146	70	72	3,106	408	394	221	154	2,452	1,831	4,283
1969 . . .	1,755	1,151	2,906	155	110	69	3,240	407	432	241	162	2,584	1,898	4,482
1970 . . .	1,857	1,150	3,007	160	90	71	3,328	459	454	215	148	2,718	1,886	4,604
Annual average rate(c)—														
1946-50 . . .	9.45	7.14	16.59	1.43	0.76	0.56	19.34	2.22	2.29	1.75	1.38	30.08	23.70	26.98
1951-55 . . .	8.09	6.20	14.29	1.18	0.54	0.43	16.44	1.97	2.14	1.57	1.22	25.99	20.56	23.34
1956-60 . . .	7.81	5.37	13.18	0.99	0.52	0.38	15.07	1.79	2.06	1.22	0.92	23.29	18.69	21.05
1961-65 . . .	7.34	5.09	12.43	0.82	0.44	0.30	13.99	1.83	1.79	1.05	0.76	21.67	17.03	19.42
1966-70 . . .	7.06	4.68	11.74	0.66	0.37	0.30	13.07	1.69	1.75	0.94	0.65	20.40	15.67	18.10
Annual rate(c)—														
1966 . . .	6.83	5.06	11.89	0.76	0.36	0.31	13.32	1.67	1.91	1.07	0.76	20.88	16.45	18.73
1967 . . .	6.85	4.99	11.84	0.74	0.40	0.33	13.31	1.68	1.70	0.94	0.63	20.57	15.82	18.26
1968 . . .	7.34	4.36	11.70	0.60	0.29	0.30	12.89	1.69	1.64	0.92	0.64	19.83	15.61	17.78
1969 . . .	7.02	4.60	11.62	0.61	0.44	0.28	12.95	1.63	1.73	0.96	0.65	20.14	15.57	17.92
1970 . . .	7.21	4.47	11.68	0.62	0.35	0.27	12.92	1.78	1.76	0.84	0.58	20.60	15.02	17.88

(a) Excludes particulars of full-blood Aborigines before 1966. (b) Age four weeks and under three months. (c) Number of deaths of children aged under one year per 1,000 live births registered.

Plate 22 below, shows infant mortality rates for each year from 1910 to 1971.

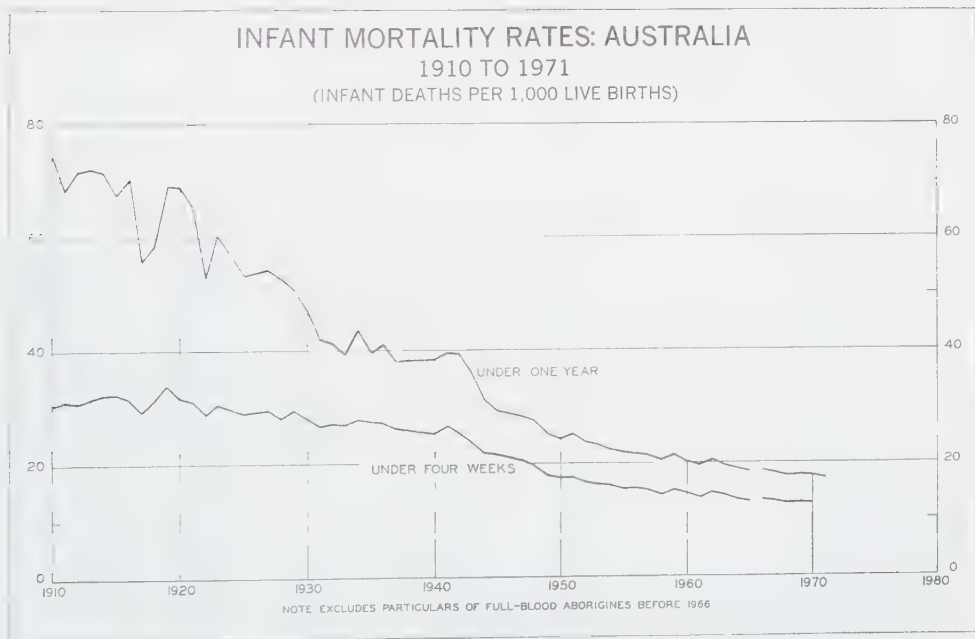


PLATE 22

### Causes of death

The classification of causes of death adopted for Australia by the Commonwealth Bureau of Census and Statistics at the inception of its mortality statistics in 1907 was that introduced by the International Institute of Statistics in 1893, reviewed by that Institute in 1899, and revised by an International Commission in 1900. This classification became known as the International List of Causes of Death, and further international revisions in 1909 (Second), 1920 (Third), 1929 (Fourth), 1938 (Fifth), 1948 (Sixth), 1955 (Seventh) and 1965 (Eighth), were successively adopted for use in Australian statistics.

The Eighth Revision of the classification (now known as the International Classification of Diseases, Injuries and Causes of Death) was used in Australia for the first time in 1968. Hence, cause of death figures for 1968 and subsequent years are not comparable, for some causes, with figures for 1967 and earlier years.

In order to facilitate the concise presentation of cause of death statistics, the present International Classification provides two special lists of causes for tabulation—the Intermediate List of 150 causes and the Abbreviated List of 50 causes. The latter has been used as the basis of the cause of death tabulations for 1970 which follow. Some categories have been sub-divided to show additional particulars of interest in Australian statistics. Table A shows the total number of males and females who died, the death rates per million of mean population, and the percentage of total deaths. Table B shows deaths for males and females, classified by age groups. More detailed data on causes of death will be found in the bulletin *Causes of Death*, No. 7.

#### A. CAUSES OF DEATH: NUMBERS, PROPORTIONS AND CRUDE RATES(a), MALES AND FEMALES, AUSTRALIA, 1970

##### ABBREVIATED LIST OF 50 CAUSES WITH CERTAIN SUB-DIVISIONS

Cause of death	Males			Females			
	ICD numbers	Number of deaths	Percentage of total	Crude rates(a)	Number of deaths	Percentage of total	Crude rates(a)
B 1 Cholera . . . . .	000	..	..	..	..	..	..
B 2 Typhoid fever . . . . .	001	..	..	..	1	(b)	(c)
B 3 Bacillary dysentery and amoebiasis . . . . .	004, 006	5	(b)	1	10	(b)	2
B 4 Enteritis and other diarrhoeal diseases . . . . .	008, 009	162	0.3	26	160	0.3	26
B 5 Tuberculosis of respiratory system . . . . .	010-012	97	0.2	15	29	0.1	5
B 6 Other tuberculosis, including late effects . . . . .	013-019	59	0.1	9	18	(b)	3
B 7 Plague . . . . .	020	..	..	..	..	..	..
B 8 Diphtheria . . . . .	032	..	..	..	..	..	..
B 9 Whooping cough . . . . .	033	..	..	..	..	..	..
B10 Streptococcal sore throat and scarlet fever . . . . .	034	2	(b)	(c)	..	..	..
B11 Meningococcal infection . . . . .	036	7	(b)	1	4	(b)	1
B12 Acute poliomyelitis . . . . .	040-043	..	..	..	..	..	..
B13 Smallpox . . . . .	050	..	..	..	..	..	..
B14 Measles . . . . .	055	4	(b)	1	5	(b)	1
B15 Typhus and other rickettsioses . . . . .	080-083	..	..	..	..	..	..
B16 Malaria . . . . .	084	..	..	..	1	(b)	(c)
B17 Syphilis and its sequelae . . . . .	090-097	19	(b)	3	9	(b)	1
B18 All other infective and parasitic diseases . . . . .	Remainder of 000-136	194	0.3	31	156	0.3	25
B19 Malignant neoplasms—							
(i) Digestive organs . . . . .	150-159	3,122	5.0	496	2,896	5.8	466
(ii) Lung . . . . .	162	2,755	4.4	438	489	1.0	79
(iii) Skin . . . . .	172, 173	305	0.5	48	210	0.4	34
(iv) Breast . . . . .	174	7	(b)	1	1,486	3.0	239
(v) Genital organs . . . . .	180-187	1,078	1.7	171	1,108	2.2	178
(vi) Urinary organs . . . . .	188, 189	581	0.9	92	259	0.5	42
(vii) Leukaemia and aleukaemia . . . . .	204-207	409	0.7	65	313	0.6	50
(viii) Other malignant and lymphatic neoplasms . . . . .	Remainder of 140-209	1,800	2.9	286	1,301	2.6	209
Total, B19 . . . . .		10,057	16.0	1,598	8,062	16.1	1,297
B20 Benign neoplasms and neoplasms of unspecified nature . . . . .	210-239	79	0.1	13	117	0.2	19
B21 Diabetes mellitus . . . . .	250	783	1.2	124	1,095	2.2	176
B22 Avitaminoses and other nutritional deficiency . . . . .	260-269	46	0.1	7	68	0.1	11
B23 Anaemias . . . . .	280-285	97	0.2	15	140	0.3	23
B24 Meningitis . . . . .	320	45	0.1	7	32	0.1	5
B25 Active rheumatic fever . . . . .	390-392	8	(b)	1	5	(b)	1
B26 Chronic rheumatic heart disease . . . . .	393-398	424	0.7	67	541	1.1	87
B27 Hypertensive disease . . . . .	400-404	779	1.2	124	964	1.9	155
B28 Ischaemic heart disease . . . . .	410-414	20,515	32.7	3,260	13,424	26.7	2,160
B29 Other forms of heart disease . . . . .	420-429	2,190	3.5	348	2,608	5.2	420
B30 Cerebrovascular disease . . . . .	430-438	6,508	10.4	1,034	9,178	18.3	1,477
B31 Influenza . . . . .	470-474	451	0.7	72	362	0.7	58
B32 Pneumonia . . . . .	480-486	1,719	2.7	273	1,424	2.8	229
B33 Bronchitis, emphysema and asthma . . . . .	490-493	3,412	5.4	542	793	1.6	128
B34 Peptic ulcer . . . . .	531-533	413	0.7	66	226	0.5	36
B35 Appendicitis . . . . .	540-543	30	(b)	5	31	0.1	5
B36 Intestinal obstruction and hernia . . . . .	550-553, 560	163	0.3	26	219	0.4	35
B37 Cirrhosis of liver . . . . .	571	479	0.8	76	224	0.4	36
B38 Nephritis and nephrosis . . . . .	580-584	403	0.6	64	406	0.8	65
B39 Hyperplasia of prostate . . . . .	600	275	0.4	44	..	..	..
B40 Abortion . . . . .	640-645	..	..	..	14	(b)	2

For footnotes see end of table next page.

A. CAUSES OF DEATH: NUMBERS, PROPORTIONS AND CRUDE RATES(a), MALES  
AND FEMALES, AUSTRALIA, 1970—continued

ABBREVIATED LIST OF 50 CAUSES WITH CERTAIN SUB-DIVISIONS—continued

Cause of death	ICD numbers	Males		Females			
		Number of deaths	Percentage of total	Crude rates(a)	Number of deaths	Percentage of total	Crude rates(a)
B41 Other complications of pregnancy, childbirth and the puerperium. Delivery without mention of complication	630-639, 650-678	727	1.2	116	52	0.1	8
B42 Congenital anomalies	740-759				566	1.1	91
B43 Birth injury, difficult labour and other anoxic and hypoxic conditions	764-768, 772, 776	559	0.9	89	328	0.7	53
B44 Other causes of perinatal mortality	Remainder of 760-779	979	1.6	156	673	1.3	108
B45 Symptoms and ill-defined conditions	780-796	392	0.6	62	374	0.7	60
B46 (i) Arteriosclerosis	440	1,023	1.6	163	1,537	3.1	247
(ii) Other diseases of circulatory system	441-448, 450-458	966	1.5	154	706	1.4	114
(iii) Other diseases of respiratory system	460-466, 500-508, 510-519	551	0.9	88	368	0.7	59
(iv) All other diseases	Remainder of 240-738	2,130	3.4	339	2,490	5.0	401
Total, B46		4,670	7.4	742	5,101	10.2	821
BE47 Motor vehicle accidents	E810-E823	2,907	4.6	462	1,045	2.1	168
BE48 All other accidents	E800-E807, E825-E949	1,854	3.0	295	1,124	2.2	181
BE49 Suicide and self-inflicted injuries	E950-E959	1,076	1.7	171	475	0.9	76
BE50 All other external causes	E960-E999	239	0.4	38	156	0.3	25
All causes		62,828	100.0	9,985	50,220	100.0	8,081

(a) Number of deaths per million of estimated mean population. (b) Less than 0.05. (c) Less than 0.5.

B. CAUSES OF DEATH: MALES AND FEMALES IN AGE GROUPS, AUSTRALIA, 1970

ABBREVIATED LIST OF 50 CAUSES (BASED ON THE EIGHTH REVISION OF THE INTERNATIONAL LIST)

		Number of deaths in age groups (years)											Not stated	Total
Cause of death(a)	Sex	Under 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75 and over			
B 2 Typhoid fever	F	..	..	..	1	..	..	..	..	..	..	1		
B 3 Bacillary dysentery and amoebiasis	M	2	2	..	..	1	..	..	..	..	..	5		
	F	6	1	1	..	..	..	1	..	..	1	1		
B 4 Enteritis and other diarrhoeal diseases	M	69	33	1	3	..	2	3	7	10	34	162		
	F	48	28	1	..	2	1	8	6	19	47	160		
B 5 Tuberculosis of respiratory system	M	..	..	..	1	..	1	10	22	29	34	97		
	F	..	..	..	..	..	4	12	8	5	..	29		
B 6 Other tuberculosis, including late effects	M	..	2	..	..	..	6	7	15	17	12	59		
	F	..	..	..	..	..	4	5	3	2	4	18		
B10 Streptococcal sore throat and scarlet fever	M	..	1	..	..	..	1	..	..	..	..	2		
B11 Meningococcal infection	M	3	1	..	1	..	1	..	1	..	..	7		
	F	1	1	1	..	..	..	..	1	..	..	4		
B14 Measles	M	1	2	..	1	..	..	..	..	..	..	5		
	F	3	2	..	..	..	..	..	..	..	..	1		
B16 Malaria	F	..	..	..	..	1	..	..	..	..	..	1		
B17 Syphilis and its sequelae	M	3	..	..	..	..	..	2	3	7	4	19		
	F	1	..	..	..	..	1	3	2	2	..	9		
B18 All other infective and parasitic diseases	M	50	6	7	13	6	9	21	24	33	25	194		
	F	26	4	8	9	9	9	14	19	22	36	156		
B19 Malignant neoplasms—														
(i) Digestive organs	M	..	1	1	2	26	107	342	764	991	888	3,122		
	F	1	..	3	4	24	79	284	513	758	1,230	2,896		
(ii) Lung	M	..	..	1	..	8	51	311	888	990	506	2,755		
	F	..	..	..	..	2	20	71	160	146	90	489		
(iii) Skin	M	..	..	..	7	29	45	47	64	53	60	305		
	F	..	..	..	4	12	24	43	43	27	57	210		
(iv) Breast	M	..	..	..	..	..	..	1	1	3	2	7		
	F	..	..	..	3	25	132	274	375	336	341	1,486		
(v) Genital organs	M	..	..	..	10	18	10	23	104	311	602	1,078		
	F	..	1	5	2	14	81	203	277	279	246	1,108		
(vi) Urinary organs	M	2	1	3	2	3	13	60	149	159	189	581		
	F	..	1	3	..	..	7	16	51	68	113	259		
(vii) Leukaemia and aleukaemia	M	2	20	38	28	13	25	33	66	94	90	409		
	F	4	15	31	13	14	19	25	51	66	75	313		
(viii) Other malignant and lymphatic neoplasms	M	..	26	43	51	56	120	293	460	486	265	1,800		
	F	5	20	36	34	35	69	147	275	330	350	1,301		
Total, B19	M	4	48	86	100	153	371	1,110	2,496	3,087	2,602	10,057		
	F	10	37	78	60	126	431	1,063	1,745	2,010	2,502	8,062		

For footnote see end of table next page.



B. CAUSES OF DEATH: MALES AND FEMALES IN AGE GROUPS, AUSTRALIA, 1970—*continued*  
 ABBREVIATED LIST OF 50 CAUSES (BASED ON THE EIGHTH REVISION OF THE INTERNATIONAL LIST)—*continued*

Cause of death(a)		Sex	Number of deaths in age groups (years)										75 and over	Not stated	Total
			Under 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74				
B20	Benign neoplasms and neoplasms of unspecified nature	M	1	1	1	6	6	4	12	23	13	12	..	79	
		F	2	1	5	4	8	12	11	27	20	27	..	117	
B21	Diabetes mellitus	M	..	..	2	5	5	28	60	146	254	283	..	783	
		F	1	..	2	8	12	16	42	134	338	541	1	1,095	
B22	Avitaminoses and other nutritional deficiency	M	3	1	3	1	..	7	6	6	4	15	..	46	
		F	6	7	1	..	2	..	2	5	14	31	..	68	
B23	Anaemias	M	..	1	..	3	2	3	3	17	25	43	..	97	
		F	1	..	1	..	1	4	3	17	25	88	..	140	
B24	Meningitis	M	19	11	1	..	..	3	..	5	5	1	..	45	
		F	11	7	2	..	3	1	2	1	3	2	..	32	
B25	Active rheumatic fever	M	..	..	1	1	..	2	1	..	2	1	..	8	
		F	..	..	1	1	..	1	..	..	1	1	..	5	
B26	Chronic rheumatic heart disease	M	..	..	3	14	13	31	68	98	105	92	..	424	
		F	..	..	1	5	24	24	66	128	117	176	..	541	
B27	Hypertensive disease	M	..	..	..	..	8	25	76	147	206	316	1	779	
		F	..	..	..	..	3	34	51	94	214	568	..	964	
B28	Ischaemic heart disease	M	..	1	..	7	58	526	2,124	4,976	6,349	6,474	..	20,515	
		F	..	..	..	1	16	119	538	1,647	3,778	7,325	..	13,424	
B29	Other forms of heart disease	M	7	5	5	11	19	51	126	233	485	1,248	..	2,190	
		F	5	5	7	6	16	35	48	141	374	1,971	..	2,608	
B30	Cerebrovascular disease	M	3	2	10	17	36	114	362	954	1,879	3,130	1	6,508	
		F	1	2	3	15	31	164	386	800	2,039	5,737	..	9,178	
B31	Influenza	M	11	3	2	6	10	12	57	78	118	153	1	451	
		F	8	3	1	2	8	20	26	46	77	171	..	362	
B32	Pneumonia	M	187	43	8	13	23	57	130	202	305	749	2	1,719	
		F	151	26	14	9	21	28	66	91	192	826	..	1,424	
B33	Bronchitis emphysema and asthma	M	4	5	22	23	15	42	171	642	1,229	1,259	..	3,412	
		F	1	5	7	15	16	37	68	139	200	305	..	793	
B34	Peptic ulcer	M	1	..	..	1	8	17	60	85	116	125	..	413	
		F	..	..	1	..	1	11	26	27	45	115	..	226	
B35	Appendicitis	M	..	..	2	2	..	3	2	2	8	11	..	30	
		F	..	2	2	2	1	..	..	4	4	16	..	31	
B36	Intestinal obstruction and hernia	M	24	1	1	4	3	..	10	20	27	73	..	163	
		F	22	1	2	1	1	6	5	23	41	117	..	219	
B37	Cirrhosis of liver	M	1	1	1	1	4	49	138	154	103	27	..	479	
		F	3	3	1	1	5	22	65	57	45	22	..	224	
B38	Nephritis and nephrosis	M	..	2	1	7	8	22	47	96	115	105	..	403	
		F	..	3	3	8	10	27	61	85	78	131	..	406	
B39	Hyperplasia of prostate	M	..	..	..	..	..	..	1	16	71	187	..	275	
B40	Abortion	F	..	..	..	3	7	4	..	..	..	..	..	14	
B41	Other complications of pregnancy, childbirth and the puerperium. Delivery without mention of complication	F	..	..	..	15	25	10	2	..	..	..	..	52	
B42	Congenital anomalies	M	509	65	40	30	11	22	18	15	12	5	..	727	
		F	395	51	29	19	10	11	18	21	9	3	..	566	
B43	Birth injury, difficult labour and other anoxic and hypoxic conditions	M	555	2	1	..	1	..	..	..	..	..	..	559	
		F	325	3	..	..	..	..	..	..	..	..	..	328	
B44	Other causes of perinatal mortality	M	979	..	..	..	..	..	..	..	..	..	..	979	
		F	668	3	2	..	..	..	..	..	..	..	..	673	
B45	Symptoms and ill-defined conditions	M	42	15	8	24	19	26	36	35	40	147	..	392	
		F	29	7	2	8	12	15	17	23	38	221	2	374	
B46	(i) Arteriosclerosis	M	..	..	..	..	..	1	4	46	183	789	..	1,023	
		F	..	..	..	..	1	..	11	30	150	1,345	..	1,537	
	(ii) Other diseases of circulatory system	M	3	..	..	4	5	22	57	206	317	352	..	966	
		F	2	1	1	3	9	20	39	75	147	409	..	706	
	(iii) Other diseases of respiratory system	M	93	31	10	4	9	10	20	68	124	182	..	551	
		F	60	16	8	6	7	10	17	32	54	158	..	368	
	(iv) All other diseases	M	42	41	47	72	44	127	241	398	478	640	..	2,130	
		F	27	24	44	48	57	149	251	369	528	993	..	2,490	
Total, B46		M	138	72	57	80	58	160	322	718	1,102	1,963	..	4,670	
		F	89	41	53	57	74	179	318	506	879	2,905	..	5,101	
BE47	Motor vehicle accidents	M	17	81	149	1,084	389	300	306	274	164	143	..	2,907	
		F	6	47	100	261	95	89	120	118	97	..	1,045		
BE48	All other accidents	M	79	104	114	250	213	244	224	187	154	284	1	1,854	
		F	63	72	47	29	19	33	63	65	109	624	..	1,124	
BE49	Suicide and self-inflicted injuries	M	..	..	4	139	173	205	240	169	93	53	..	1,076	
		F	..	..	4	50	63	86	102	94	53	23	..	475	
BE50	All other external causes	M	6	4	9	42	34	44	52	23	15	9	1	239	
		F	4	5	13	19	23	30	26	18	15	3	..	156	
All causes			M	2,718	515	539	1,890	1,276	2,388	5,805	11,889	16,182	19,619	7	62,828
		F	1,886	367	393	609	645	1,464	3,230	6,099	10,883	24,641	3	50,220	

(a) Categories of the Abbreviated List for which no deaths were recorded in 1970 have been omitted from this Table. For details of such categories see Table A above.

## Causes of death—children under one year

Causes of death of children under one year of age should be considered in relation to age at death because the emphasis on various causes changes rapidly as age at death varies. A summary for 1970, of deaths of children under one year of age, classified according to principal causes of death and age at death, is given in the following table.

DEATHS OF CHILDREN UNDER ONE YEAR OF AGE, BY CAUSE OF DEATH  
AUSTRALIA, 1970

Inter- national Classifi- cation of Diseases number	Cause of death	Age at death									
		Days		Total under one week	Weeks		Total under four weeks	Months			Total under one year
		Under 1	1-6		1	2		1-2 (a)	3-5	6-11	
760	Chronic circulatory and genito- urinary diseases in mother . . .	17	8	25	1	..	..	26	..	..	26
761	Other maternal conditions un- related to pregnancy . . .	68	37	105	4	1	..	110	1	1	113
762	Toxaemias of pregnancy . . .	73	55	128	5	1	..	134	..	..	135
763	Maternal ante and intrapartum infection . . .	16	5	21	..	..	..	21	1	..	22
764-768	Difficult labour . . .	114	62	176	4	1	1	182	2	..	184
769	Other complications of pregnancy and childbirth . . .	368	172	540	13	5	1	559	..	..	559
770	Conditions of placenta . . .	225	106	331	4	..	2	337	1	..	338
771	Conditions of umbilical cord . . .	21	7	28	1	1	..	30	..	..	30
772, 773	Birth injury without mention of cause . . .	31	44	75	5	1	..	81	..	..	81
774, 775	Haemolytic disease of newborn . . .	53	24	77	5	1	2	85	1	..	86
776	Anoxic and hypoxic conditions not elsewhere classified . . .	333	262	595	13	4	1	613	2	4	620
777	Immaturity unqualified . . .	190	72	262	4	3	2	271	1	..	272
778, 779	Other conditions of newborn . . .	25	24	49	2	1	1	53	3	4	61
740-759	Congenital anomalies . . .	265	206	471	66	45	27	609	126	97	72
000-136	Infections . . .	6	14	20	8	7	4	39	47	51	76
480-486	Pneumonia . . .	14	13	27	4	3	9	43	107	122	66
(b)	Other diseases . . .	30	35	65	17	14	17	113	126	118	90
E911-E913	Inhalation or ingestion of food or other object causing obstruction or suffocation, and accidental mechanical suffocation . . .	..	4	4	2	1	4	11	33	38	27
(c)	Other external causes . . .	8	..	8	2	1	..	11	8	19	28
	All causes . . .	1,857	1,150	3,007	160	90	71	3,328	459	454	363
											4,604

(a) Age four weeks and under 3 months. (b) 140-474, 490-738, 780-796. (c) E800-E910, E914-E999.

## Deaths from certain important causes

In the preceding tables, particulars have been given for each of the causes of death comprising the Abbreviated Classification according to the Eighth Revision of the International List. Certain important causes are discussed in detail below. The Abbreviated Classification numbers used in Tables A and B (pages 184-6) are indicated in parentheses for each cause or group of causes.

*All forms of tuberculosis (B5, B6).* The reduction in mortality from tuberculosis is shown by the decline in the crude death rate from tubercular diseases, which fell from 49 per 100,000 of mean population in 1931 to 18 in 1951, and to 0.2 in 1970. The reductions in the younger age groups are much greater. In making these comparisons, consideration of the effect of the change in basis from the Fifth to the Sixth Revision of the International List is particularly important.

*Malignant neoplasms, including neoplasms of lymphatic and haematopoietic tissues (B19).* Deaths classified under this heading according to the Sixth, Seventh and Eighth Revisions of the International List (used in Australia for deaths registered since 1950) are not directly comparable in total with those on the Fifth Revision basis (see Year Book No. 39, p. 628).

The most common sites of malignant neoplasms causing death in 1970 are identified in Table B (pages 185-6). Malignant neoplasms are predominantly diseases of advanced age, but leukaemia and aleukaemia frequently cause death at early ages.

Deaths in age groups and age-specific death rates for males and females who died from malignant neoplasms in 1970 are given in the table below, together with figures for 1950 and 1960.

**DEATHS AND DEATH RATES FROM MALIGNANT NEOPLASMS(a), BY AGE GROUP AND SEX  
AUSTRALIA, 1950 TO 1970(b)**

Age group (years)	1950				1960				1970			
	Number		Rate(c)		Number		Rate(c)		Number		Rate(c)	
	M	F	M	F	M	F	M	F	M	F	M	F
Under 15 . . . . .	92	53	8	5	141	110	9	7	138	125	7	7
15-29 . . . . .	95	75	10	8	112	75	10	7	161	105	10	7
30-44 . . . . .	249	413	27	47	361	517	32	49	463	512	39	46
45-54 . . . . .	552	669	118	148	852	831	138	143	1,110	1,063	155	152
55-64 . . . . .	1,294	1,171	347	299	1,671	1,186	401	276	2,496	1,745	457	315
65 and over . . . . .	3,072	2,694	1,014	748	4,067	3,373	1,075	679	5,689	4,512	1,305	738
<b>Total . . . . .</b>	<b>5,355</b>	<b>5,075</b>	<b>130</b>	<b>125</b>	<b>7,207</b>	<b>6,092</b>	<b>139</b>	<b>120</b>	<b>10,057</b>	<b>8,062</b>	<b>160</b>	<b>130</b>
	(d)				(e)							

(a) Includes neoplasms of lymphatic and haematopoietic tissues. (b) Excludes particulars of full-blood Aborigines prior to 1966. (c) Number of deaths per 100,000 of population at risk. For the individual age groups, the population at risk is that estimated at 30 June. For the total of all ages, the population at risk is the calendar year mean population. (d) Includes 1 male, age not stated. (e) Includes 3 males, age not stated.

Death rates from malignant neoplasms per 100,000 of mean population for Australia and for various other countries for the latest available year are as follows: Israel, 109; Japan, 114; Poland, 133; South Africa (white population), 137; Canada, 141; Australia, 145; United States of America, 159; Italy, 166; Uruguay, 188; Netherlands, 196; France, 210; England and Wales, 235; Scotland, 242.

*Causes of infant mortality.* See paragraph devoted to causes of infant deaths on page 187.

*Diseases of the circulatory system (B25-B30, part B46).* This class is the largest among causes of death, representing 58 per cent of total deaths in 1970. The following table shows the number of deaths and death rates per 100,000 of mean population from diseases of the circulatory system for the years 1950-70. Comparability of the figures is not significantly affected by the various revisions of the International Classification of Diseases.

**DEATHS AND DEATH RATES FROM DISEASES OF THE CIRCULATORY SYSTEM  
BY SEX, AUSTRALIA, 1950 TO 1970(a)**

Year	Cerebrovascular disease				Heart disease				Other diseases of circulatory system				Total			
	Number		Rate(b)		Number		Rate(b)		Number		Rate(b)		Number		Rate(b)	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1950 . . . . .	4,035	5,351	98	132	14,687	10,256	356	253	1,736	1,802	42	44	20,458	17,409	496	429
1955 . . . . .	4,811	6,224	103	137	16,382	11,303	352	249	1,843	1,886	40	42	23,036	19,413	495	427
1960 . . . . .	5,183	6,659	100	131	18,654	13,173	359	259	2,068	1,970	40	39	25,905	21,802	499	429
1965 . . . . .	5,809	7,835	101	139	21,843	15,546	381	275	2,029	2,071	35	37	29,681	25,452	517	450
1970 . . . . .	6,508	9,178	103	148	23,639	17,269	376	278	2,266	2,516	36	40	32,413	28,963	515	466

(a) Excludes particulars of full-blood Aborigines prior to 1966. (b) Per 100,000 of mean population.

*Accidents, poisonings and violence (BE47 to BE50).* Deaths in this class are classified according to external cause and not according to nature of injury. The classification provides sub-groups for accidents, including adverse reactions to prophylactic inoculations, therapeutic misadventures and late effects of accidental injury; suicide; homicide and injuries purposely inflicted by other persons; injuries undetermined whether accidentally or purposely inflicted; and injury resulting from operations of war, including delayed effects.

The following table, showing the death rates in the main sub-groups per 100,000 of mean population, indicates that the death rate from violence is between two and three times as great for males as for females. The low level of the rates and proportions for the years 1941-45 is due largely to the exclusion of deaths of defence personnel from accidents, suicide and homicide, though the rates have been based on total mean population (including defence personnel). A further contributing factor is the decrease during this period in the number of automobile accidents. From July 1947 deaths of defence personnel from accidents, etc. have again been included.



**ACCIDENTS, POISONINGS, AND VIOLENCE: DEATH RATES<sup>(a)</sup>, BY SEX  
AUSTRALIA, 1941 TO 1970<sup>(b)</sup>**

Death rate from—													
Period	Motor vehicle accidents		Suicide		Homicide(c)		Other violence(d)		Total violence		All violence, percentage of total deaths		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
1941-45 .	19	5	11	5	1	1	48	21	79	31	7.30	3.48	
1946-50 .	30	6	14	5	1	1	46	21	91	33	8.44	3.83	
1951-55 .	38	9	15	5	2	1	44	22	99	37	9.64	4.53	
1956-60 .	37	11	17	6	2	1	38	20	93	39	9.57	4.95	
1961-65 .	38	13	19	9	2	1	34	19	93	42	9.54	5.50	
1966-70 .	43	15	17	9	2	1	33	20	95	45	9.61	5.71	
1967 .	42	14	19	11	2	1	35	20	98	47	10.08	6.11	
1968 .	43	14	17	8	2	1	34	21	95	45	9.43	5.51	
1969 .	44	16	17	8	2	1	30	18	92	43	9.54	5.65	
1970 .	46	17	17	8	2	1	32	19	97	45	9.67	5.58	

(a) Number of deaths per 100,000 of mean population. (b) Excludes particulars of full-blood Aborigines before 1967. (c) Includes deaths from injury purposely inflicted by other persons (not in war) and legal intervention. (d) Includes deaths from injury undetermined whether accidentally or purposely inflicted.

In 1970 the total number of deaths from *accidental causes* (BE47, BE48) was 6,930 (4,761 males and 2,169 females). Over half of the accidental deaths were the result of transport accidents. Of these, the numbers attributable to the major causes, and the percentages of the total accidental deaths in each case, were as follows: Motor vehicle traffic accidents, 3,845 (55.48 per cent); motor vehicle non-traffic accidents, 107 (1.54 per cent); other road vehicle accidents, 37 (0.53 per cent); railway accidents, 103 (1.49 per cent); water transport accidents, 93 (1.34 per cent); aircraft accidents, 48 (0.69 per cent); a total of 4,233 (61.08 per cent). Other important causes were accidental falls, 1,161 (16.75 per cent); accidental drowning (not in transport), 377 (5.44 per cent); accidents caused by fires and flames, 220 (3.17 per cent); and accidental poisonings, 129 (1.86 per cent).

Deaths from *suicide* (BE 49) in 1970 numbered 1,551 (males, 1,076; females, 475). Poisoning, other than by gases, occurred in 579 cases (37.33 per cent of total deaths by suicide). Other important modes adopted, together with the numbers and relevant percentages, were as follows: firearms and explosives, 400 (25.79 per cent); poisoning by gases, 218 (14.06 per cent); hanging or strangulation 173 (11.15 per cent); submersion (drowning), 67 (4.32 per cent); other and unspecified modes, 114 (7.35 per cent). Of the 1,076 males who committed suicide, 376 (34.94 per cent) used firearms or explosives. For females the most common mode was poisoning (other than by gases). This was used in 282 cases (59.37 per cent).

Of the 395 deaths assigned in 1970 to all other external causes (BE50), there were 199 deaths from homicide and injury purposely inflicted by other persons, 1 death from legal intervention by firearms, 195 deaths from injury undetermined whether accidentally or purposely inflicted (of which 119 were due to poisoning other than by gases), 2 deaths from injury due to war operations by bullets and fragments and 7 deaths from late effects of injury due to operations of war.

### Vital statistics of External Territories

The following table shows, for the year 1970, the number of marriages, births and deaths registered in the External Territories under the control of Australia. More detailed information will be found in *Demography*, Bulletin No. 86.

#### EXTERNAL TERRITORIES: VITAL STATISTICS, 1970

Territory	Marriages	Births	Deaths
Christmas Island(a)	10	35	7
Cocos (Keeling) Islands(a)	6	10	3
Norfolk Island(a)	13	24	9
Territory of Papua New Guinea(b)	383	1,292	161

(a) Total population. (b) Non-indigenous population only.

## International vital statistics

In the following table vital statistics rates for certain countries are shown. Crude marriage, birth, and death rates represent the number of 'events' reported for the year stated per 1,000 of the population. Infant mortality rates are the number of deaths which occurred under one year of age per 1,000 live births. The true death rates (reciprocals of the expectation of life at birth) have been computed from the life tables for the respective countries as published in the United Nations *Demographic Yearbook*, 1970 (see explanation of true death rates, pages 177-8).

In many instances the rates shown in the following table are estimates and the results of sample surveys only. Reference should be made to the detailed comments contained in the United Nations *Demographic Yearbook*, 1970 (see particularly Technical Notes on Statistical Tables and footnotes to the tables). The countries are arranged in the same order as in the table on page 147 of the Population chapter.

## VITAL STATISTICS RATES: CERTAIN COUNTRIES—LATEST AVAILABLE YEAR

(Source: United Nations *Demographic Yearbook*, 1970)

Country	Year	Rates(a)				Year	True death rates(b)	
		Marriage	Birth	Death	Infant mortality		Male	Female
Africa—								
United Arab Republic	1969	9.4	36.9	(c)16.5	118.0	1960	19.4	18.6
Ethiopia	1963	n.a.	43.1	(c)25.0	84.2	1965-70	26.0	
South Africa—								
Asian population	1970	(d)9.0	34.1	8.1	37.0	1959-61	17.3	16.8
Coloured population	1970	(d)6.5	38.0	14.5	133.7	1959-61	20.2	18.4
White population	1970	(d)10.7	24.0	9.1	21.1	1959-61	15.4	14.0
Morocco	1962	n.a.	46.1	(c)16.5	149.0	1965-70		19.8
Algeria	1968	(e)4.7	40.9	(c)16.9	(f)86.3	1965-70		19.7
Tanzania	1967	n.a.	47.0	22.0	160-165	1967	24-25	
Kenya	1966-70	n.a.	47.8	17.5	(d)49.9	1965-70	21.1	
North America—								
United States of America	1970	10.7	18.2	9.4	19.8	1968	15.0	13.5
Mexico	1970	(g)6.8	41.3	9.2	67.4	1965-70	16.4	15.7
Canada	1969	8.6	17.5	7.3	19.3	1965-67	14.5	13.3
South America—								
Brazil	1966-70	(h)3.4	37.8	9.5	n.a.	1965-70		16.5
Argentina	1967	6.4	20.7	8.4	58.3	1960-65	15.7	14.4
Colombia	1966-70	(d)3.7	44.6	10.6	(h)70.4		n.a.	n.a.
Peru	1966-70	(h)4.1	41.8	11.1	(e)61.9	1960-65	19.0	18.0
Venezuela	1966-70	(h)5.7	40.9	7.8	(h)46.2	1961	15.1	
Asia—								
Indonesia	1966-70	(i)10.6	48.3	19.4	(i)125.0	1960	21.1	21.1
Pakistan	1966-70	n.a.	50.9	18.4	(j)142.0	1962	18.6	20.5
Japan	1970	10.0	18.9	6.9	(d)15.3	1968	14.5	13.5
Philippines	1966-70	(g)6.0	44.7	12.0	(e)72.2		n.a.	n.a.
Thailand	1966-70	(d)3.3	42.8	10.4	(d)26.2	1960	18.7	17.0
Turkey	1967	n.a.	39.6	14.6	153.0	1966		18.6
Korea, Republic of	1966-70	(f)12.0	35.6	11.0	(e)40-50	1965-70	19.6	18.6
China, Republic of (Taiwan)	1970	7.8	28.1	5.1	(d)17.5	1965	15.2	14.2
Korea, North	1966-70	n.a.	38.8	11.2	n.a.	1965-70		17.3
Ceylon	1968	6.9	(d)31.7	7.9	(e)47.7	1962	16.2	16.3
Nepal	1966-70	n.a.	44.6	22.9	n.a.	1965-70	24.6	
Europe—								
Germany—								
Eastern Germany	1970	7.7	13.9	14.1	(d)20.0	1965-66	14.6	13.6
Federal Republic of	1970	7.2	13.3	11.6	23.5	1966-68	14.8	13.6
United Kingdom	1970	(d)8.1	16.2	11.8	(d)18.6	1966-68	14.6	13.4
England and Wales	1970	(d)8.1	16.0	11.7	17.9	1967-69	14.6	13.4
Northern Ireland	1970	(d)7.7	21.1	10.9	22.7	1967-69	14.6	13.6
Scotland	1970	8.3	16.8	12.3	(d)21.1	1967-69	14.9	13.7
Italy	1970	7.4	16.8	9.7	29.2	1960-62	14.9	13.8
France	1970	7.7	16.7	10.6	15.1	1968	14.7	13.2
Spain	1970	7.4	19.8	8.6	27.8	1960	14.9	13.9
Poland	1970	8.5	16.7	8.1	33.1	1965-66	15.0	13.7
Yugoslavia	1970	8.9	17.6	8.9	(d)56.3	1966-67	15.4	14.5
Romania	1970	7.2	21.1	9.6	49.5	1964-67	15.0	14.2
Czechoslovakia	1970	8.7	15.8	11.4	22.1	1966	14.9	13.6
Netherlands	1970	9.5	18.4	8.4	12.7	1968	14.1	13.1
Hungary	1970	9.3	14.7	11.6	35.7	1964	14.9	13.9
Greece	1969	8.2	17.4	8.1	31.8	1960-62	14.8	14.1
Oceania—								
Australia	1970	9.2	20.5	9.0	17.9	1970	14.8	13.5
New Zealand	1970	9.2	22.1	8.8	16.7	1960-62	14.6	13.6
U.S.S.R.—								
Union of Soviet Socialist Republics	1970	9.7	17.5	8.2	24.4	1967-68	15.4	13.5

(a) Crude marriage, birth and death rates, i.e., number of marriages, births and deaths per 1,000 of population. Infant mortality—number of deaths of children under one year of age per 1,000 live births. (b) Number of deaths per 1,000 males and 1,000 females respectively in stationary population (see explanation on page 177). (c) 1966-70. (d) 1969. (e) 1967. (f) 1965. (g) 1970. (h) 1968. (i) 1962. (j) 1962-65.

## CHAPTER 9

### HOUSING AND BUILDING

Pages 191–6 of this chapter give details of the *characteristics of dwellings obtained from censuses*, pages 196–207 contain a *summary of building activities*, pages 207–18 outline *government activities in the field of housing*, and pages 219–24 relate to *financial arrangements associated with the erection or purchase of homes*.

Further information on dwellings obtained from censuses is available in the detailed tables of the 1961 Census and earlier censuses and in the mimeographed statements of the 1966 Census (*see the chapter Miscellaneous of this Year Book*).

More detailed information on building activity is contained in the annual bulletin *Building and Construction* (3.1) and the *Quarterly Bulletin of Building Statistics* (3.6), and current information is obtainable also in the *Quarterly Summary of Australian Statistics* (1.3), the *Monthly Review of Business Statistics* (1.4), the *Digest of Current Economic Statistics* (1.5), and the mimeographed statements *Building Statistics: Number of New Houses and Flats* (quarterly) (3.5), and *Building Approvals* (monthly) (3.2). Details for particular States are available from publications issued regularly by the Deputy Commonwealth Statistician in each State.

Commonwealth Government activities relate in the main to the provision of moneys to State Governments under Commonwealth-State Housing Agreements, to the assistance of ex-service personnel in the erection and purchase of homes, to assistance to young married couples under the Home Savings Grant Act, to the operation of the Housing Loans Insurance Corporation, and to the provision of homes in the Territories. Further details of activities of the Commonwealth and State Housing Authorities are shown in the reports issued by these authorities.

#### Census dwellings

At each census of the population, in addition to the questions relating to personal particulars, there have been a number of questions relating to dwellings. A 'dwelling' is defined as any habitation occupied by a household group living together as a domestic unit, whether comprising the whole or only part of a building, and includes, *in addition to houses and self-contained flats*, a great variety of dwellings ranging from a single-roomed shack to a multi-roomed hotel or institution. This section contains particulars of such information on dwellings as is available from the 1966 Census, together with information from earlier censuses. All statistics in this section are exclusive of particulars of dwellings occupied solely by Aborigines. Preliminary figures from the 1971 Census of Population and Housing are shown in the Appendix to this Year Book.

#### Number of dwellings

The following table shows the number of occupied and unoccupied dwellings in Australia at each census from 1911 to 1966. Occupied dwellings are classified into 'private' and 'other than private' dwellings (*see* page 192 for definitions of 'private' and 'other than private' dwellings). Unoccupied dwellings include dwellings whose occupants are temporarily absent, holiday homes, and other temporarily vacant dwellings (*see* page 195 for full explanation of the term 'unoccupied').

**DWELLINGS: AUSTRALIA, CENSUSES, 1911 TO 1966**

<i>Census</i>	<i>Occupied</i>			<i>Unoccupied</i>
	<i>Private</i>	<i>Other than private</i>	<i>Total</i>	
1911 . . .	894,389	29,070	923,459	33,473
1921 . . .	1,107,010	46,275	1,153,285	51,163
1933 . . .	1,509,671	37,705	1,547,376	68,772
1947 . . .	1,873,623	34,272	1,907,895	47,041
1954 . . .	2,343,421	36,932	2,380,353	112,594
1961 . . .	2,781,945	35,325	2,817,270	194,114
1966 . . .	3,151,926	33,730	3,185,656	263,873



The following table shows the number of occupied and unoccupied dwellings in the urban and rural areas of Australia at the Census of 30 June 1966. For delimitation of 'urban centres' see this Year Book, page 131.

**DWELLINGS: URBAN AND RURAL, AUSTRALIA, CENSUS, 30 JUNE 1966**

Division	Occupied				Unoccupied	
	Private	Other than private	Total		Number	Percentage of total
			Number	Percentage of total		
Urban—						
Metropolitan . . .	1,886,055	14,287	1,900,342	59.65	86,826	32.90
Other . . . . .	778,681	9,500	788,181	24.74	81,748	30.98
Rural . . . . .	487,190	9,943	497,133	15.61	95,299	36.12
Total . . . . .	3,151,926	33,730	3,185,656	100.00	263,873	100.00

The total numbers of occupied and unoccupied dwellings in each State and Territory at the Censuses of 1961 and 1966 were as follows.

**DWELLINGS: STATES AND TERRITORIES, CENSUSES, 1961 AND 1966**

State or Territory	Census, 30 June 1961		Census, 30 June 1966	
	Occupied	Unoccupied	Occupied	Unoccupied
New South Wales . . . . .	1,061,609	72,432	1,189,539	101,546
Victoria . . . . .	790,529	47,389	888,984	64,757
Queensland . . . . .	398,233	33,969	449,169	41,818
South Australia . . . . .	261,908	17,061	302,314	25,110
Western Australia . . . . .	194,317	13,705	224,663	17,965
Tasmania . . . . .	91,258	8,582	99,366	10,800
Northern Territory . . . . .	5,479	179	8,067	380
Australian Capital Territory . . . . .	13,937	797	23,554	1,497
Australia . . . . .	2,817,270	194,114	3,185,656	263,873

**Class of dwelling (1961 and 1966)**

The following table shows the numbers of the various classes of occupied dwellings in the metropolitan urban, other urban, and rural areas of Australia at the Census of 30 June 1966 and totals for the Censuses of 1961 and 1966. The numbers of the various classes of dwelling for each State and Territory at the 1966 Census are given in the table on page 193.

**Private dwellings** are classified into the following categories;

*private house*—includes houses, sheds, huts, garages, etc., used for dwelling purposes;

*share of private house*—portion of a shared private house which is occupied separately and for which portion a separate householder's schedule was received;

*self-contained flat*—part of a house or other building which can be completely closed off and which has its own cooking and bathing facilities;

*other private dwellings*—include private dwellings such as rooms, apartments, etc., which are parts of buildings but are not self-contained units.

**Other than private dwellings** includes hotels; motels; boarding houses, lodging houses and hostels; educational, religious and charitable institutions; hospitals; defence and penal establishments; police and fire stations; clubs; staff barracks and quarters, etc.

**OCCUPIED DWELLINGS, BY CLASS: URBAN AND RURAL(a), AUSTRALIA  
CENSUSES, 1961 AND 1966**

Class of dwelling	Census, 30 June 1961			Census, 30 June 1966			Percentage of total occupied dwellings	Inter-censal increase or decrease
	Total	Percentage of total occupied dwellings	Urban	Rural		Total		
				Metro-politan	Other			
Private dwellings—								
Private house . . . . .	2,393,169	84.95	1,529,059	692,742	459,924	2,681,725	84.18	288,556
Share of private house . . . . .	79,550	2.82	(b)20,940	(b)3,682	(b)1,292	25,914	0.81	—53,636
Self-contained flat . . . . .	217,586	7.72	274,367	63,338	7,880	345,585	10.85	129,167
Share of self-contained flat . . . . .	(c)	(c)	(d)956	(d)193	(d)19	1,168	0.04	(c)
Shed, hut, tent, etc. . . . .	41,997	1.49	5,084	9,541	16,431	31,056	0.97	—10,941
Other private dwellings . . . . .	49,643	1.76	55,649	9,185	1,644	66,478	2.09	16,835
Total private dwellings . . . . .	2,781,945	98.75	1,886,055	778,681	487,190	3,151,926	98.94	369,981
Non-private dwellings(e) . . . . .	35,325	1.25	14,287	9,500	9,943	33,730	1.06	—1,595
Total occupied dwellings . . . . .	2,817,270	100.00	1,900,342	788,181	497,133	3,185,656	100.00	368,386

(a) Census, 30 June 1966. (b) Represents 10,077 private houses in metropolitan areas, 1,799 in other urban areas and 637 in rural areas. (c) At the 1961 Census share of self-contained flat was not separately identified. In cases where more than one household group were occupying a self-contained flat they were counted as one household group occupying a self-contained flat. (d) Represents 462 self-contained flats in metropolitan areas, 93 in other urban areas and 9 in rural areas. (e) Details of the number of each of the types of non-private dwellings are available on request.

Minus sign (—) denotes decrease.

**OCCUPIED DWELLINGS, BY CLASS: STATES AND TERRITORIES  
CENSUS, 30 JUNE 1966**

Class of dwelling	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
Private dwellings—									
Private house . . . . .	961,077	752,776	381,681	271,045	200,900	88,780	5,817	19,649	2,681,725
Share of private house . . . . .	11,496	9,166	1,586	2,140	844	469	43	170	25,914
Self-contained flat . . . . .	164,380	92,166	43,069	20,802	14,074	7,036	838	3,220	345,585
Share of self-contained flat . . . . .	666	277	104	61	18	22	5	15	1,168
Shed, hut, tent, etc. . . . .	12,309	3,725	7,952	1,938	3,439	882	616	195	31,056
Other private dwellings . . . . .	28,194	23,338	7,759	3,644	2,169	1,093	180	101	66,478
Total private dwellings . . . . .	1,178,122	881,448	442,151	299,630	221,444	98,282	7,499	23,350	3,151,926
Non-private dwellings . . . . .	11,417	7,536	7,018	2,684	3,219	1,084	568	204	33,730
Total occupied dwellings . . . . .	1,189,539	888,984	449,169	302,314	224,663	99,366	8,067	23,554	3,185,656

**Population according to class of dwelling, etc. (1961 and 1966)**

**NUMBER OF INMATES, BY CLASS OF DWELLING: AUSTRALIA  
CENSUSES, 1961 AND 1966**

	Census, 30 June 1961		Census, 30 June 1966					Inter-censal increase or decrease
	Total population	Percentage of total population	Urban		Rural	Total population	Percentage of total population	
			Metro-politan	Other				
Persons enumerated in—								
Private dwellings—								
Private house . . . . .	8,881,128	84.52	5,581,056	2,498,521	1,743,443	9,823,020	85.04	941,892
Share of private house . . . . .	224,066	2.13	59,943	10,281	4,556	74,780	0.65	-149,286
Self-contained flat . . . . .	552,596	5.26	646,203	163,753	23,759	833,715	7.22	283,648
Share of self-contained flat . . . . .	(a)	(a)	2,060	425	44	2,529	0.02	(a)
Shed, hut, tent, etc. . . . .	116,458	1.11	13,415	24,390	38,881	76,686	0.66	-39,772
Other private dwellings . . . . .	96,246	0.92	97,321	18,476	3,973	119,770	1.04	23,524
Total private dwellings . . . . .	9,870,494	93.93	6,399,998	2,715,846	1,814,656	10,930,500	94.63	1,060,006
Non-private dwellings . . . . .	596,412	5.68	313,587	174,539	96,901	585,027	5.06	-11,385
Total . . . . .	10,466,906	99.61	6,713,585	2,890,385	1,911,557	11,515,527	99.70	1,048,621
Persons not enumerated in dwellings—								
Campers out . . . . .	15,994	0.15	1,412	7,128	6,708	15,248	0.13	-746
Migratory(b) . . . . .	25,286	0.24	..	..	..	19,687	0.17	-5,599
Total population . . . . .	10,508,186	100.00	6,714,997	2,897,513	1,918,265	11,550,462	100.00	1,042,276

(a) At the 1961 Census, share of a self-contained flat was not separately identified. (b) Shipping, railway and air travellers.

Minus sign (—) denotes decrease.

## Occupied private dwellings

The tables on pages 194-5 show private occupied houses and self-contained flats classified according to material of outer walls; nature of occupancy; and facilities. Details of number of rooms are shown for occupied private dwellings.

## Material of outer walls (1961 and 1966)

## OCCUPIED PRIVATE HOUSES AND SELF-CONTAINED FLATS, BY MATERIAL OF OUTER WALLS: AUSTRALIA, CENSUSES, 1961 AND 1966

Material of outer walls	Census, 30 June 1961				Census, 30 June 1966			
	Private houses	Percent- age of total	Self- contained flats	Percent- age of total	Private houses	Percent- age of total	Self- contained flats	Percent- age of total
Brick . . . . .	743,426	31.06	144,209	66.28	674,286	25.14	224,947	65.09
Brick veneer(a) . . . . .	(b)	(b)	(b)	(b)	262,150	9.78	16,250	4.70
Stone . . . . .	71,476	2.99	5,904	2.71	68,898	2.57	6,514	1.88
Concrete . . . . .	62,839	2.63	9,226	4.24	68,144	2.54	17,670	5.11
Wood . . . . .	1,056,180	44.13	38,862	17.86	1,076,435	40.14	50,260	14.54
Iron, tin . . . . .	35,930	1.50	984	0.45	28,364	1.06	1,169	0.34
Fibro-cement . . . . .	411,960	17.21	17,675	8.12	495,284	18.47	28,559	8.26
Other . . . . .	10,165	0.42	349	0.16	8,164	0.30	216	0.06
Not stated . . . . .	1,193	0.05	377	0.17	(c)	(c)	(c)	(c)
<b>Total</b> . . . . .	<b>2,393,169</b>	<b>100.00</b>	<b>217,586</b>	<b>100.00</b>	<b>2,681,725</b>	<b>100.00</b>	<b>345,585</b>	<b>100.00</b>

(a) So described in individual census schedules. (b) At the 1961 Census, dwellings with walls of brick veneer were not separately identified and for tabulation purposes were included with brick walled dwellings. (c) In the small number of cases where material of outer walls was not stated a material was selected during processing of the 1966 Census schedules. Selection was based upon the answer given for the geographically nearest dwelling of the same class as the dwelling for which material of outer walls was not stated.

## Number of rooms (1961 and 1966)

## OCCUPIED PRIVATE DWELLINGS, BY NUMBER OF ROOMS AND CLASS OF DWELLING AUSTRALIA, CENSUSES, 1961 AND 1966

Number of rooms per dwelling(a)	Census, 30 June 1961				Census, 30 June 1966			
	Class of dwelling				Class of dwelling			
	Private house	Self- contained flat	Other	Total private dwellings	Private house	Self- contained flat	Other	Total private dwellings
1 . . . . .	1,179	2,282	36,371	39,832	2,194	7,803	40,801	50,798
2 . . . . .	17,000	20,635	48,857	86,492	14,925	50,851	37,078	102,854
3 . . . . .	63,849	53,585	38,108	155,542	62,605	93,579	23,049	179,233
4 . . . . .	384,691	77,531	23,106	485,328	369,127	113,611	11,037	493,775
5 . . . . .	902,466	39,914	13,891	956,271	1,055,571	50,894	6,080	1,112,545
6 . . . . .	656,239	15,723	2,522	674,484	697,115	18,744	3,414	719,273
7 . . . . .	231,806	4,471	741	237,018	305,770	6,104	1,706	313,580
8 . . . . .	80,889	1,674	297	82,860	105,955	2,334	788	109,077
9 . . . . .	28,064	572	104	28,740	37,447	806	301	38,554
10 . . . . .	12,766	83	65	12,914	16,574	401	173	17,148
11 and over . . . . .	11,415	77	85	11,577	14,442	458	189	15,089
Not stated . . . . .	2,805	1,039	7,043	10,887	..	..	..	..
<b>Total private dwellings</b> . . . . .	<b>2,393,169</b>	<b>217,586</b>	<b>171,190</b>	<b>2,781,945</b>	<b>2,681,725</b>	<b>345,585</b>	<b>124,616</b>	<b>3,151,926</b>
<b>Average number of rooms per dwelling</b> . . . . .	<b>5.44</b>	<b>3.97</b>	<b>2.65</b>	<b>5.16</b>	<b>5.53</b>	<b>3.74</b>	<b>2.45</b>	<b>5.21</b>

(a) Includes kitchen and permanently enclosed sleep-out but does not include bathroom, pantry, laundry or storehouse.



## Nature of occupancy (1961 and 1966)

OCCUPIED PRIVATE HOUSES AND SELF-CONTAINED FLATS, BY NATURE OF OCCUPANCY  
AUSTRALIA, CENSUSES, 1961 AND 1966

Nature of occupancy	Private houses				Self-contained flats			
	Census, 30 June 1961		Census, 30 June 1966		Census, 30 June 1961		Census, 30 June 1966	
	Total	Percent- age of private houses	Total	Percent- age of private houses	Total	Percent- age of flats	Total	Percent- age of flats
Owner								
Purchaser by instalments } 1,847,200		77.19	2,123,723	79.19	43,527	20.00	72,711	21.04
Tenant of government authority . . . . .	99,610	4.16	132,997	4.96	13,925	6.40	27,346	7.91
Other tenant . . . . .	388,116	16.22	360,976	13.46	155,110	71.29	237,436	68.71
Other methods of occupancy . . . . .	49,432	2.07	48,032	1.79	4,336	1.99	5,644	1.63
Not stated . . . . .	8,811	0.37	15,997	0.60	688	0.32	2,448	0.71
<b>Total</b> . . . . .	<b>2,393,169</b>	<b>100.00</b>	<b>2,681,725</b>	<b>100.00</b>	<b>217,586</b>	<b>100.00</b>	<b>345,585</b>	<b>100.00</b>

At the 1961 Census persons paying interest only on a mortgage on the dwelling were instructed to enter 'owner', but a person buying a house by regular payments including interest and principal was instructed to enter 'purchaser by instalments'. It is probable, however, that some 'purchasers by instalments' described themselves on 1961 Census schedules as 'owners' especially where they possessed the title to the property. However, the extent of such mis-statements has not been measured. At the 1966 Census, as the two categories can be logically grouped, separate details for 'owners' and 'purchasers by instalments' were not collected.

## Facilities (1961 and 1966)

OCCUPIED PRIVATE HOUSES AND SELF-CONTAINED FLATS, BY  
FACILITIES, AUSTRALIA, CENSUSES, 1961 AND 1966

Facilities	Private houses		Self-contained flats	
	Census 30 June 1961(a)	Census 30 June 1966	Census 30 June 1961	Census 30 June 1966
With gas only . . . . .	5,386	5,169	171	481
With electricity only . . . . .	1,322,300	1,505,550	63,378	128,072
With gas and electricity . . . . .	1,008,763	1,139,868	153,231	214,876
Neither gas nor electricity . . . . .	87,839	23,497	277	271
Not stated . . . . .	10,878	7,641	529	1,885
<b>Total</b> . . . . .	<b>2,435,166</b>	<b>2,681,725</b>	<b>217,586</b>	<b>345,585</b>
With television set . . . . .	1,139,578	2,154,321	97,226	235,083

(a) Includes 41,997 sheds, huts, tents, etc.

NOTE. Dwellings for which electricity was not stated but which had television have been classified as having electricity and therefore included as such in this table.

## Unoccupied dwellings (1961 and 1966)

The following table classifies unoccupied dwellings by class. Unoccupied dwellings include vacant dwellings available for sale or renting; dwellings such as 'week-ender', 'holiday home', 'second home', 'seasonal workers' quarters', which were not occupied on the night of the census; dwellings normally occupied, but whose usual occupants were temporarily absent on the night of the census; newly completed dwellings whose owners or tenants had not entered into occupation on the night of the census; dwellings described as 'to be demolished', 'condemned', 'deceased estate', 'exhibition home', etc.; and buildings constructed as dwellings but used for non-dwelling purposes on the night of the Census. The total number of unoccupied dwellings shown for any area does not, therefore, represent the number of vacant dwellings available for sale or renting.

**UNOCCUPIED DWELLINGS, BY CLASS: URBAN AND RURAL, AUSTRALIA  
CENSUSES, 1961 AND 1966**

Class of dwelling	Census 30 June 1961 Total	Census, 30 June 1966			
		Urban		Rural	Total
		Metropolitan	Other		
Private house . . . .	156,473	55,636	66,362	79,149	201,147
Self-contained flat . . . .	21,887	26,922	11,923	1,397	40,242
Other private dwellings(a) . . . .	7,073	4,157	3,133	8,881	16,171
Non-private dwellings(a) . . . .	1,443	111	330	5,872	6,313
Not stated . . . .	7,238	..	..	..	..
<b>Total unoccupied dwellings . . . .</b>	<b>194,114</b>	<b>86,826</b>	<b>81,748</b>	<b>95,299</b>	<b>263,873</b>

(a) The inter-censal increase in unoccupied other private and non-private dwellings is mainly the result of a better coverage at the 1966 Census of dwellings occupied for only a short period of time each year, such as shearers' huts, seasonal workers' quarters, etc.

## Building

### Statistics of building approved

Statistics of building approvals have been compiled since the year 1953-54 from (a) permits issued by local government authorities in the areas subject to building control by these authorities, and (b) contracts let or work commenced and day labour projects authorised by government authorities. *They relate only to approvals for buildings as distinct from the construction of roads, railways, bridges, earthworks, water storages, etc.* Values shown represent the estimated cost when completed (excluding cost of land) of new buildings and alterations and additions to existing buildings. Before 1 July 1966 additions of \$10,000 and over were included with new buildings in all States except New South Wales, where they were included in 'alterations and additions'. From 1 July 1966 alterations and/or additions of \$10,000 and over are included with new buildings in all States.

### Statistics of building commenced, completed and under construction

These relate to building by private contractors, government authorities and owner-builders. The following outlines the scope of the statistics; (a) *only the erection of new buildings as distinct from the construction of roads, railways, bridges, earthworks, water storages, etc., is covered*; (b) before 1 July 1966 major new additions to existing buildings in all States and major alterations in New South Wales were included with new buildings, while from 1 July 1966 alterations and/or additions of \$10,000 and over are included with new buildings in all States; (c) minor additions, alterations, renovations and repairs are excluded because of the difficulty of obtaining details of this work; (d) temporary dwellings, sheds, huts, etc., are excluded; (e) figures for houses exclude flats and dwellings attached to other new buildings (the value of dwellings attached to other new buildings is included with the value of buildings to which they are attached); figures for flats include 'home units'; (f) details obtained from government authorities and building contractors refer to all areas, whereas details for owner-builders cover only areas subject to building control by local government authorities.

The following definitions of terms used in this section are necessary for interpretation of the data presented.

**Private or government ownership.** A building is classified as 'private' or 'government' according to ownership at date of commencement. Thus 'government' includes buildings erected for Commonwealth and State Governments, semi-government and local government authorities, either by contractor or by day-labour, whether these buildings are for their own use or for rental or sale after completion. Houses erected for particular persons under government-sponsored home building schemes or with government financial assistance are classified as 'private'.

**Owner-built.** An 'owner-built' house is one actually erected or being erected by the owner or under the owner's direction without the services of a contractor who is responsible for the whole job.

*Contract-built.* Includes the operations of all building contractors, and government authorities which undertake the erection of new buildings with day labour.

*Commenced.* A building is regarded as having been commenced when work on foundations has begun. Owing to the difficulty of defining the exact point that this represents in building operations, classifications made by informants may not be entirely uniform.

*Completed.* A building is regarded as having been completed when the contractor has fulfilled the terms of the contract. As with commencements, the classifications made may not be entirely uniform.

*Under construction.* A building is regarded as being under construction if it has been commenced but not completed, whether or not work on the building is actively proceeding.

*Values.* All values shown exclude the value of land and represent the estimated value of buildings on completion.

*Values of work done.* The values of work done during the period represent the estimated value of work actually carried out on buildings during the period. For any building the sum of these values obtained during its construction equals the value of the building on completion. Data relating to the value of work done on owner-built houses are not collected. However, the figures shown for the value of work done include a component relating to owner-built houses calculated on the basis of the figures collected for the value of owner-built houses commenced, completed and under construction.

*The values of work yet to be done on buildings under construction at the end of period* are the differences between the estimated total value of work done at the end of period and the estimated final value of the building on completion. They therefore represent the values of work which will be carried out in subsequent quarters on buildings already under construction.

*Type of building.* Classification is according to the function a building is intended to serve. A building which is ancillary to other buildings or forms part of a group of related buildings is classified according to the function of the group as a whole.

*Persons working.* Figures relate to persons working on the jobs of contractors who undertake the erection of new buildings and of government authorities which erect new buildings on their own account. They include persons working on alterations, additions, repairs and maintenance when these jobs are undertaken by such contractors and authorities. Contractors are asked to give details of all persons working on their jobs *on a specified day*, including working principals, men working as or for sub-contractors and men temporarily laid off on account of weather. Because of the intermittent employment of various types of sub-contractors on any particular job, it is sometimes difficult for contractors and authorities to provide precise particulars of the number of sub-contractors and the number of employees of sub-contractors working on their jobs on the specified day. This factor may cause some estimation by persons completing returns and some degree of understatement in figures shown in tables. On the other hand, because of frequent movement between jobs of some types of tradesmen (such as electricians) who may work on several jobs on the one day, a small element of duplication may occur. The figures *exclude* persons working on owner-built houses, and employees of builders who undertake only alterations, additions, repairs and maintenance.

#### New houses approved, commenced, completed and under construction

The next table provides a summary for 1970-71 of the number of new houses approved, commenced, completed and under construction in each State and Territory. For a graph showing the number of new houses commenced, completed and under construction for the period 1961-62 to 1970-71 see plate 23, page 198.

NEW HOUSES: NUMBER, STATES AND TERRITORIES, 1970-71

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Approved . . .	31,175	24,679	16,381	8,745	11,825	2,581	1,123	3,645	100,154
Commenced . . .	29,448	24,771	15,486	8,769	12,043	2,546	1,071	3,673	97,807
Completed . . .	29,051	25,179	14,685	8,308	11,921	2,263	855	3,169	95,431
Under construction at end of year . . .	12,959	10,368	4,134	4,142	5,177	1,393	888	2,001	41,062



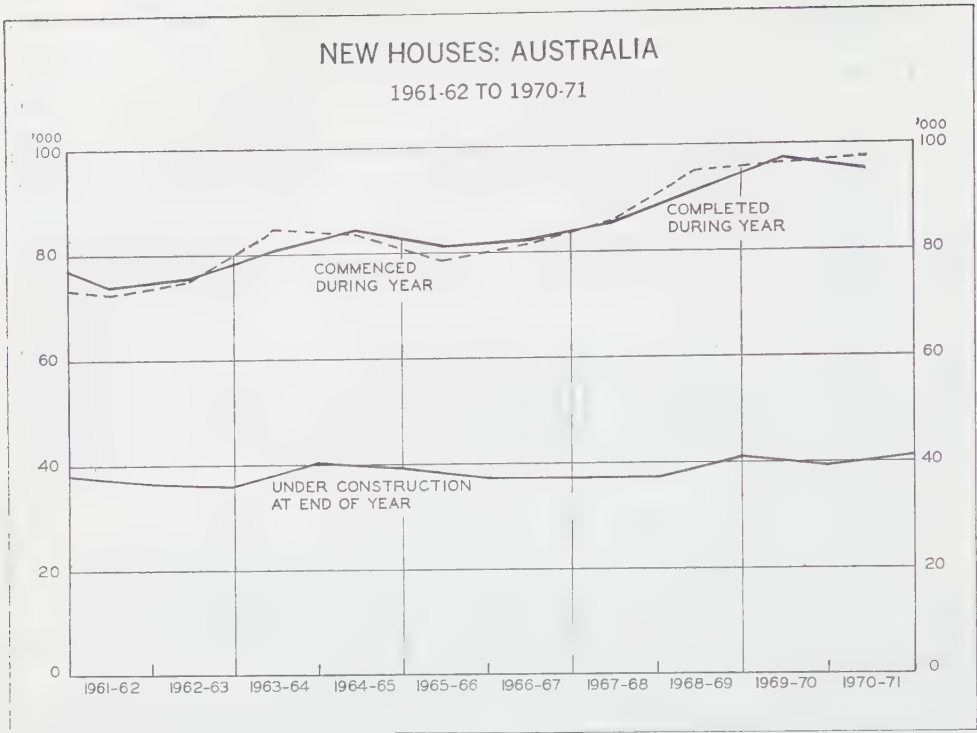


PLATE 23

The following table shows the number of *new houses approved* in each State or Territory, according to *private and government ownership*, during the years 1966-67 to 1970-71.

**NEW HOUSES APPROVED, BY OWNERSHIP: NUMBER, STATES AND TERRITORIES**  
1966-67 TO 1970-71

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
PRIVATE									
1966-67	23,666	20,068	11,331	5,495	7,127	2,500	91	1,458	71,736
1967-68	26,478	20,998	11,958	4,925	10,030	2,393	131	1,374	78,287
1968-69	28,102	22,357	12,443	5,704	12,912	2,206	224	1,889	85,837
1969-70	27,496	23,538	13,371	6,335	12,280	2,123	599	2,236	87,978
1970-71	27,066	23,213	14,332	6,594	9,255	1,969	234	2,673	85,336
GOVERNMENT									
1966-67	4,737	1,602	1,804	1,632	1,585	718	428	1,155	13,661
1967-68	2,873	1,320	1,494	942	1,889	916	676	590	10,700
1968-69	4,226	1,969	1,856	2,082	1,567	488	633	1,009	13,830
1969-70	4,146	2,050	1,742	1,675	1,685	532	907	933	13,670
1970-71	4,109	1,466	2,049	2,151	2,570	612	889	972	14,818
TOTAL									
1966-67	28,403	21,670	13,135	7,127	8,712	3,218	519	2,613	85,397
1967-68	29,351	22,318	13,452	5,867	11,919	3,309	807	1,964	88,987
1968-69	32,328	24,326	14,299	7,786	14,479	2,694	857	2,898	99,667
1969-70	31,642	25,588	15,113	8,010	13,965	2,655	1,506	3,169	101,648
1970-71	31,175	24,679	16,381	8,745	11,825	2,581	1,123	3,645	100,154

The number of *new houses commenced* in each State and Territory by *contractors and owner-builders* during the years 1966-67 to 1970-71 is shown in the following table.

**NEW HOUSES COMMENCED, CONTRACT-BUILT OR OWNER-BUILT  
NUMBER, STATES AND TERRITORIES, 1966-67 TO 1970-71**

<i>Year</i>			<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>CONTRACT-BUILT(a)</b>											
1966-67	.	.	22,466	18,330	10,802	7,843	7,626	2,170	475	2,088	71,800
1967-68	.	.	22,530	18,858	11,913	6,311	10,282	2,181	708	2,326	75,109
1968-69	.	.	26,465	20,334	12,930	6,881	12,464	1,747	820	2,784	84,425
1969-70	.	.	26,155	21,352	13,373	7,542	11,716	1,877	754	3,128	85,897
1970-71	.	.	24,431	21,538	14,503	8,444	11,047	1,883	949	3,517	86,312
<b>OWNER-BUILT</b>											
1966-67	.	.	3,362	2,760	1,504	529	913	782	91	117	10,058
1967-68	.	.	3,675	3,050	1,375	441	1,190	961	55	63	10,810
1968-69	.	.	3,905	3,246	1,250	331	1,384	833	103	87	11,139
1969-70	.	.	4,078	3,223	1,093	398	1,283	805	96	48	11,024
1970-71	.	.	5,017	3,233	983	325	996	663	122	156	11,495
<b>TOTAL</b>											
1966-67	.	.	25,828	21,090	12,306	8,372	8,539	2,952	566	2,205	81,858
1967-68	.	.	26,205	21,908	13,288	6,752	11,472	3,142	763	2,389	85,919
1968-69	.	.	30,370	23,580	14,180	7,212	13,848	2,580	923	2,871	95,564
1969-70	.	.	30,233	24,575	14,466	7,940	12,999	2,682	850	3,176	96,921
1970-71	.	.	29,448	24,771	15,486	8,769	12,043	2,546	1,071	3,673	97,807

(a) Includes operations of government authorities.

The following table shows the number of *new houses completed* in each State and Territory by *contractors and owner-builders* during the years 1966-67 to 1970-71.

**NEW HOUSES COMPLETED, CONTRACT-BUILT OR OWNER-BUILT  
NUMBER, STATES AND TERRITORIES, 1966-67 TO 1970-71**

<i>Year</i>			<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>CONTRACT-BUILT(a)</b>											
1966-67	.	.	21,216	19,149	10,675	8,739	7,398	1,850	265	1,861	71,153
1967-68	.	.	23,111	18,648	11,720	6,998	8,810	2,442	644	2,331	74,704
1968-69	.	.	24,360	19,390	12,857	6,574	11,616	1,905	674	2,436	79,812
1969-70	.	.	25,582	20,988	13,510	7,128	12,435	1,962	885	3,120	85,610
1970-71	.	.	24,349	21,718	13,685	7,966	10,862	1,719	761	3,099	84,159
<b>OWNER-BUILT</b>											
1966-67	.	.	3,563	2,977	1,602	615	874	915	92	169	10,807
1967-68	.	.	4,159	2,944	1,378	446	1,048	889	55	133	11,052
1968-69	.	.	4,434	3,341	1,411	380	1,224	799	66	79	11,734
1969-70	.	.	4,097	3,714	1,189	376	1,498	899	69	72	11,914
1970-71	.	.	4,702	3,461	1,000	342	1,059	544	94	70	11,272

(a) Includes operations of government authorities.

The number of *new houses completed* in each State and Territory during the years 1966-67 to 1970-71, according to *private and government ownership*, is shown in the following table.

**NEW HOUSES COMPLETED, BY OWNERSHIP: NUMBER, STATES AND TERRITORIES, 1966-67 TO 1970-71**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>PRIVATE</b>									
1966-67 . . .	21,343	19,558	10,711	6,252	6,676	2,138	153	1,336	68,167
1967-68 . . .	23,126	20,276	11,381	5,141	8,533	2,594	134	1,557	72,742
1968-69 . . .	25,503	21,334	12,548	5,110	11,007	1,969	156	1,612	79,239
1969-70 . . .	25,733	23,047	12,837	5,902	12,384	2,178	187	2,044	84,312
1970-71 . . .	24,931	23,110	12,879	6,353	9,648	1,636	244	2,425	81,226
<b>GOVERNMENT</b>									
1966-67 . . .	3,436	2,568	1,566	3,102	1,596	627	204	694	13,793
1967-68 . . .	4,144	1,316	1,717	2,303	1,325	737	565	907	13,014
1968-69 . . .	3,291	1,397	1,720	1,844	1,833	735	584	903	12,307
1969-70 . . .	3,946	1,655	1,862	1,602	1,549	683	767	1,148	13,212
1970-71 . . .	4,120	2,069	1,806	1,955	2,273	627	611	744	14,205
<b>TOTAL</b>									
1966-67 . . .	24,779	22,126	12,277	9,354	8,272	2,765	357	2,030	81,960
1967-68 . . .	27,270	21,592	13,098	7,444	9,858	3,331	699	2,464	85,756
1968-69 . . .	28,794	22,731	14,268	6,954	12,840	2,704	740	2,515	91,546
1969-70 . . .	29,679	24,702	14,699	7,504	13,933	2,861	954	3,192	97,524
1970-71 . . .	29,051	25,179	14,685	8,308	11,921	2,263	855	3,169	95,431

The following tables show the number of *new houses completed* in each State and Territory during 1970-71 and in Australia during the years 1966-67 to 1970-71, classified according to the *material of their outer walls*.

**NEW HOUSES COMPLETED, BY MATERIAL OF OUTER WALLS: NUMBER STATES AND TERRITORIES, 1970-71**

<i>Material of outer walls</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Brick, brick veneer, concrete and stone . . .	19,702	22,394	7,304	7,601	10,206	1,711	441	3,168	72,527
Wood (weatherboard, etc.) . . .	2,376	862	4,537	14	95	350	2	1	8,237
Asbestos-cement . . .	6,759	1,864	2,405	647	1,589	121	378	..	13,763
Other . . .	214	59	439	46	31	81	34	..	904
<b>Total . . .</b>	<b>29,051</b>	<b>25,179</b>	<b>14,685</b>	<b>8,308</b>	<b>11,921</b>	<b>2,263</b>	<b>855</b>	<b>3,169</b>	<b>95,431</b>

**NEW HOUSES COMPLETED, BY MATERIAL OF OUTER WALLS: NUMBER AUSTRALIA, 1966-67 TO 1970-71**

<i>Material of outer walls</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
Brick, brick veneer, concrete and stone . . .	54,116	57,506	64,696	71,816	72,527
Wood (weatherboard, etc.) . . .	11,294	11,633	10,554	9,967	8,237
Asbestos-cement . . .	15,581	15,820	15,525	14,919	13,763
Other . . .	969	797	771	822	904
<b>Total . . .</b>	<b>81,960</b>	<b>85,756</b>	<b>91,546</b>	<b>97,524</b>	<b>95,431</b>



The number of *new houses under construction* at the end of each year 1966-67 to 1970-71 in each State and Territory is shown in the following table.

NEW HOUSES UNDER CONSTRUCTION: NUMBER, STATES AND TERRITORIES  
1966-67 TO 1970-71

At end of year—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1966-67 . . .	12,564	10,423	3,460	3,869	3,524	1,729	557	1,276	37,402
1967-68 . . .	11,499	10,713	3,650	3,151	5,123	1,538	621	1,201	37,496
1968-69 . . .	13,075	11,290	3,562	3,366	6,104	1,372	804	1,547	41,120
1969-70 . . .	13,025	10,960	3,329	3,713	5,115	1,163	692	1,522	39,519
1970-71 . . .	12,959	10,368	4,134	4,142	5,177	1,393	888	2,001	41,062

#### New flats approved, commenced, completed and under construction

The following table shows the number of new flats approved, commenced, completed and under construction for the year 1970-71. For a graph showing the number of new flats commenced, completed and under construction for the period 1961-62 to 1970-71 see plate 24, page 201.

NEW FLATS: NUMBER, STATES AND TERRITORIES, 1970-71

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Approved . . .	18,598	9,671	4,438	5,169	1,893	610	247	246	40,872
Commenced . . .	18,912	10,312	3,639	4,282	1,759	747	435	310	40,396
Completed . . .	20,346	12,087	3,159	4,000	5,013	667	367	333	45,972
Under construction at end of year . . .	11,384	6,398	1,379	2,344	1,115	482	302	274	23,678

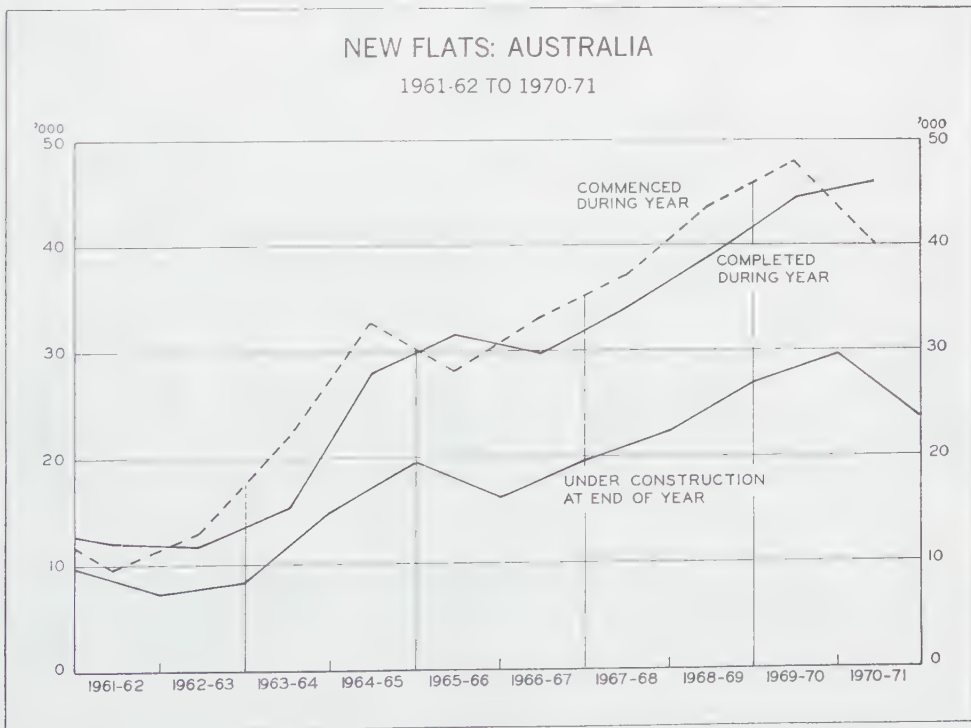


PLATE 24

The following table shows the number of *new flats approved* in each State or Territory during the years 1966-67 to 1970-71 according to *private and government ownership*.

**NEW FLATS APPROVED, BY OWNERSHIP  
NUMBER, STATES AND TERRITORIES, 1966-67 TO 1970-71**

<i>Year</i>			<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
PRIVATE											
1966-67	.	.	12,544	11,495	3,766	1,355	2,708	209	156	190	32,423
1967-68	.	.	17,028	14,894	2,853	1,835	3,094	346	475	36	40,561
1968-69	.	.	21,258	13,134	2,474	2,419	5,493	432	381	299	45,890
1969-70	.	.	22,228	13,437	2,807	4,422	5,349	723	826	293	50,085
1970-71	.	.	16,742	8,612	4,409	4,993	1,281	548	179	246	37,010
GOVERNMENT											
1966-67	.	.	1,376	1,443	20	..	27	18	225	8	3,117
1967-68	.	.	1,030	1,288	6	17	106	79	54	..	2,580
1968-69	.	.	972	939	14	172	699	6	102	..	2,904
1969-70	.	.	1,089	1,344	..	74	1,323	58	202	108	4,198
1970-71	.	.	1,856	1,059	29	176	612	62	68	..	3,862
TOTAL											
1966-67	.	.	13,920	12,938	3,786	1,355	2,735	227	381	198	35,540
1967-68	.	.	18,058	16,182	2,859	1,852	3,200	425	529	36	43,141
1968-69	.	.	22,230	14,073	2,488	2,591	6,192	438	483	299	48,794
1969-70	.	.	23,317	14,781	2,807	4,496	6,672	781	1,028	401	54,283
1970-71	.	.	18,598	9,671	4,438	5,169	1,893	610	247	246	40,872

The number of *new flats commenced* in each State or Territory during the years 1966-67 to 1970-71 is shown in the following table.

**NEW FLATS COMMENCED: NUMBER, STATES AND TERRITORIES, 1966-67 TO 1970-71**

<i>Year</i>			<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1966-67	.	.	13,145	11,987	3,662	1,321	2,455	186	308	194	33,258
1967-68	.	.	14,369	14,399	2,997	1,561	3,172	367	305	28	37,198
1968-69	.	.	18,416	14,117	2,586	2,100	5,366	364	488	301	43,738
1969-70	.	.	21,471	13,505	2,438	3,526	5,839	641	350	288	48,058
1970-71	.	.	18,912	10,312	3,639	4,282	1,759	747	435	310	40,396

The following table shows the number of *new flats completed* in each State and Territory during the years 1966-67 to 1970-71, according to *private and government ownership*.

**NEW FLATS COMPLETED, BY OWNERSHIP  
NUMBER, STATES AND TERRITORIES, 1966-67 TO 1970-71**

<i>Year</i>			<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
PRIVATE											
1966-67	.	.	10,853	9,218	4,004	1,482	1,730	153	85	152	27,677
1967-68	.	.	12,770	11,635	3,161	1,350	2,382	219	163	167	31,847
1968-69	.	.	15,231	12,921	2,843	1,711	3,337	352	254	74	36,723
1969-70	.	.	17,901	12,672	2,434	2,612	4,915	490	338	259	41,621
1970-71	.	.	19,461	11,071	3,159	3,755	3,608	583	267	333	42,237
GOVERNMENT											
1966-67	.	.	1,235	920	14	..	12	32	42	..	2,255
1967-68	.	.	1,338	1,051	20	23	10	73	48	4	2,567
1968-69	.	.	1,131	854	20	30	154	14	215	..	2,418
1969-70	.	.	873	1,320	2	45	681	12	133	1	3,067
1970-71	.	.	885	1,016	..	245	1,405	84	100	..	3,735
TOTAL											
1966-67	.	.	12,088	10,138	4,018	1,482	1,742	185	127	152	29,932
1967-68	.	.	14,108	12,686	3,181	1,373	2,392	292	211	171	34,414
1968-69	.	.	16,362	13,775	2,863	1,741	3,491	366	469	74	39,141
1969-70	.	.	18,774	13,992	2,436	2,657	5,596	502	471	260	44,688
1970-71	.	.	20,346	12,087	3,159	4,000	5,013	667	367	333	45,972

The number of *new flats under construction* at the end of each year 1966-67 to 1970-71 in each State and Territory is shown in the table below.

**NEW FLATS UNDER CONSTRUCTION  
NUMBER, STATES AND TERRITORIES, 1966-67 TO 1970-71**

<i>At end of year—</i>			<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1966-67	.	.	8,369	7,223	1,357	593	1,589	179	304	181	19,795
1967-68	.	.	8,630	8,914	1,173	798	2,369	254	398	38	22,574
1968-69	.	.	10,684	9,158	896	1,155	4,237	246	417	267	27,060
1969-70	.	.	13,122	8,399	898	2,036	4,466	384	249	303	29,857
1970-71	.	.	11,384	6,398	1,379	2,344	1,115	482	302	274	23,678

**Value of new buildings approved, commenced, completed and under construction**

The following table summarises, for the years 1966-67 to 1970-71, the values of all new buildings approved, commenced, completed, under construction, the value of work done, and the value of work yet to be done in each State and Territory.



**NEW BUILDINGS: VALUE, STATES AND TERRITORIES, 1966-67 TO 1970-71**  
(\$'000)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
APPROVED									
1966-67	597,416	494,050	219,283	116,623	162,937	53,955	17,604	60,594	1,722,462
1967-68	689,070	516,339	268,894	148,672	240,792	72,018	28,488	44,168	2,008,441
1968-69	802,479	560,671	266,056	145,872	305,594	52,289	28,048	71,256	2,232,265
1969-70	975,091	684,134	306,010	189,052	380,681	59,539	68,434	103,384	2,766,325
1970-71	1,017,043	625,908	373,568	209,354	307,680	68,043	51,295	102,266	2,755,157
COMMENCED									
1966-67	604,641	509,892	231,776	130,268	169,457	62,077	17,807	54,762	1,780,680
1967-68	689,372	504,864	280,536	129,004	242,305	63,152	25,696	54,869	1,989,798
1968-69	793,388	575,994	268,821	150,145	297,684	56,200	29,901	65,015	2,237,148
1969-70	975,115	674,588	283,734	181,999	361,594	62,131	44,025	98,638	2,681,824
1970-71	1,104,352	672,037	383,190	217,912	317,880	70,189	57,593	115,726	2,938,879
COMPLETED									
1966-67	625,956	471,943	219,098	135,221	162,135	48,218	13,243	57,582	1,733,396
1967-68	638,958	497,370	256,974	138,531	195,403	61,885	20,295	56,268	1,865,684
1968-69	721,504	578,126	271,264	156,712	254,833	56,948	25,926	71,348	2,136,661
1969-70	808,202	629,109	311,079	147,638	303,396	66,452	43,406	73,036	2,382,318
1970-71	946,552	667,966	333,785	200,895	365,012	59,684	34,006	83,139	2,691,039
UNDER CONSTRUCTION AT END OF YEAR									
1966-67	460,701	422,577	150,432	118,940	100,119	51,269	19,811	59,141	1,382,990
1967-68	521,357	443,905	176,917	112,356	148,846	52,506	25,205	60,476	1,541,568
1968-69	604,977	451,906	177,913	108,939	194,278	51,896	29,121	54,150	1,673,180
1969-70	792,249	514,808	154,994	145,486	256,543	51,022	29,668	82,615	2,027,385
1970-71	986,280	520,378	211,182	174,376	209,675	63,465	52,971	116,892	2,335,219
VALUE OF WORK DONE DURING YEAR									
1966-67	597,044	487,403	231,768	143,587	163,726	53,098	16,635	52,163	1,745,424
1967-68	639,226	525,750	255,345	137,506	212,437	60,058	22,510	61,515	1,914,347
1968-69	762,546	580,374	287,704	144,297	270,012	58,785	27,746	63,886	2,195,350
1969-70	905,973	645,477	306,270	165,540	342,942	68,428	43,557	78,486	2,556,673
1970-71	1,028,476	677,474	345,769	209,716	347,022	65,446	47,446	94,284	2,815,633
VALUE OF WORK YET TO BE DONE ON BUILDINGS UNDER CONSTRUCTION AT END OF YEAR									
1966-67	236,050	227,947	71,498	56,907	52,627	27,442	10,237	30,852	713,560
1967-68	297,625	220,897	99,612	51,348	84,372	30,506	13,416	26,940	824,715
1968-69	340,542	226,647	84,167	60,346	115,335	28,060	15,512	28,076	898,685
1969-70	433,081	275,232	66,088	78,600	139,430	25,677	17,098	51,395	1,086,601
1970-71	482,350	280,095	94,783	84,917	114,512	30,934	24,526	50,574	1,162,691

The following tables show the value of *all new buildings completed* in each State and Territory during 1970-71 and in Australia during the years 1966-67 to 1970-71, according to the *type of building*.

**NEW BUILDINGS COMPLETED, BY TYPE OF BUILDING: VALUE  
STATES AND TERRITORIES, 1970-71**

(\$'000)

<i>Type of building</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>Houses—</b>									
Brick, brick veneer, concrete and stone	273,622	257,409	88,147	79,354	130,149	19,847	5,979	42,637	897,144
Wood (weather-board, etc.)	22,961	7,217	38,944	203	1,684	2,978	24	26	74,037
Asbestos-cement	55,407	12,951	20,658	4,757	17,397	916	6,211	..	118,297
Other	1,776	532	3,768	324	442	717	509	..	8,068
<b>Total houses</b>	<b>353,766</b>	<b>278,109</b>	<b>151,517</b>	<b>84,639</b>	<b>149,671</b>	<b>24,459</b>	<b>12,724</b>	<b>42,663</b>	<b>1,097,548</b>
<b>Flats</b>	<b>181,202</b>	<b>85,717</b>	<b>24,085</b>	<b>26,001</b>	<b>39,964</b>	<b>4,816</b>	<b>3,900</b>	<b>2,742</b>	<b>368,427</b>
<b>Total houses and flats</b>	<b>534,968</b>	<b>363,827</b>	<b>175,601</b>	<b>110,639</b>	<b>189,636</b>	<b>29,274</b>	<b>16,624</b>	<b>45,405</b>	<b>1,465,974</b>
<b>Hotels, hostels, etc.</b>	<b>14,803</b>	<b>22,762</b>	<b>14,318</b>	<b>4,093</b>	<b>17,054</b>	<b>2,609</b>	<b>1,508</b>	<b>2,116</b>	<b>79,263</b>
<b>Shops</b>	<b>37,100</b>	<b>17,956</b>	<b>11,775</b>	<b>14,118</b>	<b>11,270</b>	<b>2,097</b>	<b>849</b>	<b>1,190</b>	<b>96,355</b>
<b>Factories</b>	<b>82,554</b>	<b>69,174</b>	<b>17,950</b>	<b>10,734</b>	<b>18,006</b>	<b>7,451</b>	<b>4,153</b>	<b>1,182</b>	<b>211,204</b>
<b>Offices</b>	<b>67,424</b>	<b>62,714</b>	<b>45,488</b>	<b>13,178</b>	<b>39,736</b>	<b>2,905</b>	<b>1,808</b>	<b>10,368</b>	<b>243,621</b>
<b>Other business premises</b>	<b>63,354</b>	<b>34,985</b>	<b>20,318</b>	<b>9,699</b>	<b>18,816</b>	<b>4,330</b>	<b>3,158</b>	<b>2,114</b>	<b>156,774</b>
<b>Education</b>	<b>51,499</b>	<b>43,591</b>	<b>23,896</b>	<b>19,477</b>	<b>20,589</b>	<b>4,259</b>	<b>3,250</b>	<b>14,236</b>	<b>180,796</b>
<b>Religion</b>	<b>6,048</b>	<b>3,695</b>	<b>1,231</b>	<b>895</b>	<b>1,145</b>	<b>377</b>	<b>162</b>	<b>166</b>	<b>13,719</b>
<b>Health</b>	<b>28,254</b>	<b>29,080</b>	<b>6,700</b>	<b>8,164</b>	<b>17,527</b>	<b>1,921</b>	<b>297</b>	<b>94</b>	<b>92,037</b>
<b>Entertainment and recreation</b>	<b>21,745</b>	<b>10,120</b>	<b>3,884</b>	<b>1,532</b>	<b>6,750</b>	<b>1,264</b>	<b>486</b>	<b>2,148</b>	<b>47,929</b>
<b>Miscellaneous</b>	<b>38,802</b>	<b>10,061</b>	<b>12,625</b>	<b>8,365</b>	<b>24,485</b>	<b>3,197</b>	<b>1,715</b>	<b>4,120</b>	<b>103,370</b>
<b>Total other buildings</b>	<b>411,582</b>	<b>304,140</b>	<b>158,182</b>	<b>90,256</b>	<b>175,377</b>	<b>30,410</b>	<b>17,382</b>	<b>37,735</b>	<b>1,225,064</b>
<b>Total new buildings</b>	<b>946,552</b>	<b>667,966</b>	<b>333,785</b>	<b>200,895</b>	<b>365,012</b>	<b>59,684</b>	<b>34,006</b>	<b>83,139</b>	<b>2,691,039</b>

**NEW BUILDINGS COMPLETED, BY TYPE OF BUILDING: VALUE  
AUSTRALIA, 1966-67 TO 1970-71**

(\$'000)

<i>Type of building</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
<b>Houses—</b>					
Brick, brick veneer, concrete and stone	537,653	598,159	705,906	830,364	897,144
Wood (weatherboard, etc.)	85,471	89,686	85,903	84,190	74,037
Asbestos-cement	103,542	109,414	116,030	118,190	118,297
Other	8,230	6,603	7,033	7,804	8,068
<b>Total houses</b>	<b>734,896</b>	<b>803,864</b>	<b>914,871</b>	<b>1,040,543</b>	<b>1,097,548</b>
<b>Flats</b>	<b>179,891</b>	<b>218,894</b>	<b>267,262</b>	<b>338,884</b>	<b>368,427</b>
<b>Total houses and flats</b>	<b>914,787</b>	<b>1,022,758</b>	<b>1,182,133</b>	<b>1,379,426</b>	<b>1,465,974</b>
<b>Hotels, hostels etc.</b>	<b>51,145</b>	<b>47,898</b>	<b>55,454</b>	<b>73,897</b>	<b>79,263</b>
<b>Shops</b>	<b>76,462</b>	<b>60,239</b>	<b>77,321</b>	<b>85,984</b>	<b>96,355</b>
<b>Factories</b>	<b>164,588</b>	<b>162,186</b>	<b>190,520</b>	<b>196,661</b>	<b>211,204</b>
<b>Offices</b>	<b>144,245</b>	<b>169,841</b>	<b>158,191</b>	<b>157,232</b>	<b>243,621</b>
<b>Other business premises</b>	<b>76,136</b>	<b>73,416</b>	<b>98,823</b>	<b>118,171</b>	<b>156,774</b>
<b>Education</b>	<b>128,492</b>	<b>144,998</b>	<b>161,402</b>	<b>161,256</b>	<b>180,796</b>
<b>Religion</b>	<b>14,124</b>	<b>13,145</b>	<b>16,132</b>	<b>11,828</b>	<b>13,719</b>
<b>Health</b>	<b>51,106</b>	<b>49,703</b>	<b>56,200</b>	<b>71,347</b>	<b>92,037</b>
<b>Entertainment and recreation</b>	<b>42,309</b>	<b>33,942</b>	<b>41,924</b>	<b>44,451</b>	<b>47,929</b>
<b>Miscellaneous</b>	<b>70,002</b>	<b>87,561</b>	<b>98,561</b>	<b>82,070</b>	<b>103,370</b>
<b>Total other buildings</b>	<b>818,609</b>	<b>842,927</b>	<b>954,529</b>	<b>1,002,888</b>	<b>1,225,064</b>
<b>Total new buildings</b>	<b>1,733,396</b>	<b>1,865,684</b>	<b>2,136,661</b>	<b>2,382,318</b>	<b>2,691,039</b>

The following table shows the value of *all new buildings completed* in Australia during the years 1968-69 to 1970-71, classified by *type of building and private and government ownership*.

**NEW BUILDINGS COMPLETED, BY TYPE OF BUILDING AND OWNERSHIP: VALUE  
AUSTRALIA, 1968-69 TO 1970-71  
(\$'000)**

Type of building	Private			Government		
	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
Houses—						
Brick, brick veneer, concrete and stone . . . . .	658,525	769,971	827,511	47,381	60,395	69,635
Wood (weatherboard, etc.) . . . . .	71,456	68,088	60,553	14,446	16,101	13,482
Asbestos-cement . . . . .	84,469	85,401	81,726	31,560	32,787	36,570
Other . . . . .	5,262	5,284	6,822	1,772	2,519	1,244
Total houses . . . . .	819,709	928,741	976,616	95,161	111,802	120,932
Flats . . . . .	249,369	313,677	341,047	17,895	25,207	27,383
Total houses and flats . . . . .	1,069,079	1,242,417	1,317,667	113,056	137,011	148,311
Hotels, hostels, etc. . . . .	45,287	64,856	73,395	10,167	9,043	5,869
Shops . . . . .	76,447	84,570	95,455	875	1,416	899
Factories . . . . .	163,043	184,573	192,141	27,480	12,090	19,064
Offices . . . . .	106,440	105,412	167,158	51,751	51,818	76,464
Other business premises . . . . .	63,528	66,638	90,418	35,293	51,534	66,350
Education . . . . .	24,375	28,702	33,611	137,025	132,553	147,189
Religion . . . . .	16,132	11,828	13,719	..	..	..
Health . . . . .	10,917	14,775	23,342	45,285	56,574	68,701
Entertainment and recreation . . . . .	32,017	34,738	40,047	9,907	9,713	7,883
Miscellaneous . . . . .	30,415	35,882	48,041	68,145	46,186	55,334
Total other buildings . . . . .	568,603	631,969	777,323	385,925	370,921	447,747
Total new buildings . . . . .	1,637,680	1,874,386	2,094,985	498,980	507,932	596,054

**Value of building approved**

The following table shows the values of approvals for houses and flats, other new buildings, and alterations and additions in Australia for the years 1966-67 to 1970-71. Before 1 July 1966 additions of \$10,000 and over were included with new buildings in all States except New South Wales, where they were included in 'alterations and additions'. From 1 July 1966 alterations and or additions of \$10,000 and over are included new buildings in all States.

**BUILDING APPROVED: VALUE, AUSTRALIA, 1966-67 TO 1970-71  
(\$'000)**

Type of building	1966-67	1967-68	1968-69	1969-70	1970-71
Houses and flats . . . . .	953,587	1,099,733	1,314,645	1,485,617	1,437,015
Other new buildings . . . . .	768,875	908,708	917,620	1,280,708	1,318,143
Total new buildings . . . . .	1,722,462	2,008,441	2,232,265	2,766,325	2,755,157
Alterations and additions . . . . .	134,805	143,436	156,096	168,810	188,354
Total building . . . . .	1,857,267	2,151,877	2,388,361	2,935,135	2,943,503
Private . . . . .	1,397,455	1,614,157	1,902,675	2,317,867	2,300,021
Government . . . . .	459,812	537,720	485,686	617,268	643,476



**Persons working on jobs carried out by builders of new buildings**

The following table shows the number of contractors, sub-contractors and wage earners working on jobs *carried out by builders of new buildings* in each State and Territory at 30 June 1971. It also shows the numbers of these persons classified according to their main building occupations and the type of building on which they were working.

**PERSONS WORKING ON JOBS CARRIED OUT BY BUILDERS OF NEW BUILDINGS  
STATES AND TERRITORIES, 30 JUNE 1971**

INCLUDING CONTRACTOR AND SUB-CONTRACTOR PRINCIPALS ACTUALLY WORKING  
ON JOBS BUT EXCLUDING PERSONS WORKING ON OWNER-BUILT HOUSES

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Contractors . . . .	4,362	2,798	1,685	568	646	317	66	337	10,779
Sub-contractors . . . .	11,377	10,462	4,258	3,670	3,181	833	346	1,569	35,696
Wage earners . . . .	43,077	28,983	19,107	9,236	13,965	4,584	2,231	3,922	125,105
Carpenters . . . .	18,079	13,469	10,060	3,312	4,327	2,181	731	1,467	53,626
Bricklayers . . . .	7,151	5,440	2,292	2,102	2,365	481	176	798	20,805
Painters . . . .	4,179	3,681	1,948	1,209	1,476	350	174	584	13,601
Electricians . . . .	3,750	2,643	1,265	884	1,235	285	122	321	10,505
Plumbers . . . .	5,211	4,355	2,081	1,205	1,579	359	174	446	15,410
Builders' labourers . . . .	9,111	5,214	3,221	1,594	2,433	1,248	477	840	24,138
Other . . . .	11,335	7,441	4,183	3,168	4,377	830	789	1,372	33,495
New houses and flats . . . .	27,343	20,418	11,354	7,230	7,626	2,061	1,300	3,127	80,459
Other new buildings(a) . . . .	28,128	20,608	13,033	6,020	8,719	3,559	1,274	2,416	83,757
Repairs and maintenance(b) . . . .	3,345	1,217	663	224	1,447	114	69	285	7,364
<b>Total . . . .</b>	<b>58,816</b>	<b>42,243</b>	<b>25,050</b>	<b>13,474</b>	<b>17,792</b>	<b>5,734</b>	<b>2,643</b>	<b>5,828</b>	<b>171,580</b>

‡ (a) Includes persons working on alterations and additions carried out by builders of new buildings. (b) Carried out by builders of new buildings.

The number of persons in each State and Territory working on jobs *carried out by builders of new buildings* at the end of June of each year 1967 to 1971 is shown in the following table.

**PERSONS WORKING ON JOBS CARRIED OUT BY BUILDERS OF NEW BUILDINGS  
STATES AND TERRITORIES, JUNE 1967 TO 1971**

INCLUDING CONTRACTOR AND SUB-CONTRACTOR PRINCIPALS ACTUALLY WORKING  
ON JOBS BUT EXCLUDING PERSONS WORKING ON OWNER-BUILT HOUSES

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
30 June 1967 . . . .	46,608	42,931	22,454	12,467	14,505	6,354	1,054	4,474	150,847
28 " 1968 . . . .	50,415	45,458	23,709	11,370	16,812	6,129	1,566	4,632	160,091
30 " 1969 . . . .	55,909	46,462	26,077	12,019	19,201	5,618	1,662	4,534	171,482
30 " 1970 . . . .	57,928	45,190	23,620	13,282	19,593	5,493	1,668	5,313	172,087
30 " 1971 . . . .	58,816	42,243	25,050	13,474	17,792	5,734	2,643	5,828	171,580

## Government activities in the housing field

### Housing Agreements between Commonwealth and State Governments

Under the Commonwealth-State Housing Agreements the Commonwealth Government makes substantial long-term loans to the States for the provision of housing.

*The 1945 Agreement.* In November 1945 the Commonwealth Government entered into an Agreement with the Governments of the States whereby the Commonwealth Government would provide finance for, and the State Governments would undertake the building of, housing projects. Between 1945-46 and 1955-56, under this Agreement, the Commonwealth Government advanced to the States a total of \$481,118,000.

Initially, dwellings constructed under the 1945 Agreement were only sold to tenants if the tenant was able to arrange payment of the full purchase price to the State immediately on sale. Subsequent amendments to the Agreement progressively eased conditions of sale. For information on the conditions of sale, etc., under the 1945 Agreement see Year Book No. 48, page 367.

*The 1956 Agreement.* In 1956 the Commonwealth and the States entered into a new Agreement under which added emphasis was placed on the construction of dwellings for private ownership. The Agreement provided that parts of the loans advanced to each State were to be advanced to building societies and other approved institutions for lending to private home builders and purchasers. The balance of the amounts advanced to each State was used by the States for the erection of dwellings for either rental or sale. The Commonwealth was entitled to specify that up to five per cent of the

moneys allocated for the erection of dwellings by the State be set aside for the erection of dwellings for serving members of the defence forces. For features of the 1956 Commonwealth and State Housing Agreement see Year Book No. 48, pages 367-8.

*The 1961 Agreement.* The period during which Commonwealth advances to the States could be made under the 1956 Agreement terminated on 30 June 1961. A new Agreement was entered into which extended for a further five years the period during which advances could be made and also amended the 1956 Agreement in certain respects concerning funds for the erection of dwellings for rental to servicemen and the rate of interest payable on Commonwealth advances.

*The 1966 Agreement.* A new Agreement was entered into which extended for a further five years the period during which advances could be made, and also amended the 1956-1961 Agreement in certain respects concerning the definition of 'member of the forces', the erection by the States of blocks of flats in metropolitan areas, the erection of dwellings for rental to servicemen, and the provision of finance to home builders in rural areas. Interest rates under the Agreement have been from 1 July 1961 to 6 November 1968, 4.25 per cent per annum; 7 November 1968 to 9 July 1969, 4.4 per cent per annum; 10 July 1969 to 6 May 1970, 5 per cent per annum; 7 May 1970 to 30 June 1971, 6 per cent per annum.

For further information regarding the 1961 and 1966 Agreements see Year Book No. 53, pages 276-7.

### Operations under the several Housing Agreements

The following tables show the operations under the several Housing Agreements during 1970-71 and in the years to 30 June 1971. Figures shown in Year Books of earlier years for the 1956 to 1966 Housing Agreements have been revised and are included in the cumulative figures shown in the three tables on this and the following page.

#### COMMONWEALTH AND STATE HOUSING AGREEMENTS: SUMMARY, 1970-71

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
ADVANCES TO STATES (\$'000)							
Advances to States(a)	51,148	40,048	11,798	25,000	14,033	8,750	150,777
State Housing Programme(b)	33,810	25,550	7,350	11,750	8,750	6,125	93,335
Home Builders' Account—							
Advances(c)	14,490	10,950	3,150	13,250	3,750	2,625	48,215
Amounts drawn by institutions	24,801	18,226	4,501	15,600	4,922	3,374	71,424
Service Housing Funds allocated by—							
Commonwealth	2,848	3,548	1,298	..	1,533	..	9,227
States	1,691	1,277	114	..	437	..	3,519
NUMBER OF DWELLINGS							
State Housing Programme—							
Commenced	4,322	2,373	1,374	1,807	1,957	584	12,417
Completed	3,831	2,801	1,398	1,808	2,368	587	12,793
Under construction at 30 June 1970	3,594	1,488	603	1,370	1,202	189	8,446
Home Builders' Account—							
Purchased—							
New	1,751	580	241	1,097	155	140	3,964
Other	287	..	..	..	..	90	377
New construction—							
Approved	1,193	1,057	335	1,528	342	208	4,663
Commenced	1,116	1,594	316	1,484	334	221	5,065
Completed	1,118	1,530	269	1,587	351	207	5,062
Service Housing—							
Agreed programme	511	220	18	..	144	..	893
Completed(d)	231	355	317	..	108	1	1,012
Sold under—							
1945 Agreement	773	530	112	15	105	(e)	1,535
1956 to 1966 Agreements	1,945	1,365	572	621	123	436	5,062

(a) Includes supplementary advances for Service Housing. (b) The maximum amount is 70 per cent of the Commonwealth advances, other than supplementary advances for Service Housing. (c) The minimum amount must be 30 per cent of the Commonwealth advances other than supplementary advances for Service Housing. (d) Also included in State Housing Programme above and may include completions of houses for servicemen programmed in previous years. (e) Tasmania did not operate under the 1945 Agreement after August 1950.

**COMMONWEALTH AND STATE HOUSING AGREEMENTS: ADVANCES TO STATES(a)**  
**1966-67 TO 1970-71 AND TO 30 JUNE 1971**  
 (\$'000)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.(b)</i>	<i>Total</i>
1966-67 . . . . .	43,325	32,960	13,740	20,750	9,478	7,500	127,753
1967-68 . . . . .	44,610	33,765	12,627	21,000	11,241	6,700	129,943
1968-69 . . . . .	45,308	36,038	12,147	19,500	12,394	7,512	132,899
1969-70 . . . . .	49,711	36,733	13,989	21,250	12,373	7,635	141,691
1970-71 . . . . .	51,148	40,048	11,798	25,000	14,033	8,750	150,777
<b>Total from 1 July 1945 . . . . .</b>	<b>720,196</b>	<b>606,820</b>	<b>191,093</b>	<b>276,929</b>	<b>182,127</b>	<b>95,147</b>	<b>2,072,312</b>

(a) Includes supplementary advances (Service Housing) under the 1956 to 1966 Agreements. (b) Tasmania withdrew from the 1945 Agreement in August 1950 and repaid all advances made to it.

**COMMONWEALTH AND STATE HOUSING AGREEMENTS: NUMBER OF DWELLINGS PROVIDED(a), STATES, 1966-67 TO 1970-71 AND TO 30 JUNE 1971**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.(b)</i>	<i>Total</i>
1966-67 . . . . .	5,866	5,156	1,738	4,029	1,128	1,025	18,942
1967-68 . . . . .	6,548	4,739	1,782	3,614	1,290	1,072	19,045
1968-69 . . . . .	5,739	4,213	1,850	2,834	1,370	1,047	17,053
1969-70 . . . . .	6,031	4,275	2,054	3,419	1,628	998	18,405
1970-71 . . . . .	6,987	4,911	1,908	4,492	2,874	1,024	22,196
<b>Total from 1 July 1945(c) . . . . .</b>	<b>120,567</b>	<b>92,287</b>	<b>34,196</b>	<b>51,342</b>	<b>32,762</b>	<b>13,523</b>	<b>344,677</b>

(a) The total number of houses and flats completed under State Housing Programmes plus, since 30 June 1956, the numbers completed and purchased under the Home Builders' Account. (b) Tasmania withdrew from the 1945 Agreement in August 1950 and repaid all advances made to it. (c) Includes some dwellings erected before 1945-46 to which the 1945 Agreement applied and also 1,130 dwellings completed in Tasmania up to the time of that State's withdrawal from the 1945 Agreement in August 1950.

**COMMONWEALTH AND STATE HOUSING AGREEMENTS: NUMBER OF HOUSES SOLD**  
**1966-67 TO 1970-71 AND TO 30 JUNE 1971**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
1966-67 . . . . .	876	1,859	598	1,002	567	385	5,287
1967-68 . . . . .	1,647	1,794	504	813	481	521	5,760
1968-69 . . . . .	1,434	1,404	428	640	357	526	4,789
1969-70 . . . . .	2,022	1,626	627	654	323	432	5,684
1970-71 . . . . .	2,713	1,895	684	636	228	436	6,597
<b>Total from 1 July 1948 . . . . .</b>	<b>35,749</b>	<b>30,863</b>	<b>10,069</b>	<b>7,282</b>	<b>7,632</b>	<b>5,889</b>	<b>97,484</b>

**States Grants Housing Act 1971**

The 1956-66 Housing Agreement expired on 30 June 1971 and was not further renewed. Instead, the Federal and State Governments agreed upon a new arrangement under which the provisions contained in the Housing Agreement would be substantially continued for a period of five years up to 30 June 1976. Financial assistance of greater benefit to the States than was previously provided under the Agreements is being made available principally in the form of non-repayable interest-free grants for specific purposes.

A basic housing grant of \$2.75 million per annum is payable for 30 years in respect of State housing activities in the 1971-72 financial year. Similarly a further \$2.75 million per annum is payable for 30 years in respect of State housing activities in each of the following four financial years. In total, over the period for which the grant is payable, the States will receive \$412.5 million. The grant is to be applied towards reducing the payments that would otherwise, but for the grant, have been required to be made not only by tenants and purchasers of State housing authority dwellings but also by borrowers from building societies and certain other approved institutions operating on advances from a special Home Builders' Account.



A Rental Assistance Grant of \$1.25 million per annum in each of the five years 1971-72 to 1975-76 is being distributed amongst the States for use by each State housing authority in reducing the rents of dwellings for families they consider to have insufficient means to meet the rents ordinarily payable to the authority.

A further benefit to the States is that they will no longer be under an obligation to use portion of the moneys allocated to the State housing authority for construction of houses for serving members of the Forces. The full cost of these houses is to be met by the Federal Government.

### Dwellings for Aged Pensioners Scheme

This Scheme is directed towards those in the community considered to be most in need of housing assistance. These are single eligible pensioners living alone in unsuitable private accommodation and paying too high a proportion of their pensions in rent. Most State housing authorities have for many years been building accommodation for aged persons, and Federal Government assistance under this Scheme was introduced to supplement the States' efforts and to effect a more rapid reduction in the waiting lists with State housing authorities.

Under the *States Grants (Dwellings for Aged Pensioners) Act* 1969 an amount of \$25 million is being made available to the States over a period of five years from 1969-70 to 1973-74 for construction by them of single self-contained accommodation for allocation, at rents they can afford to pay, to single eligible pensioners in receipt of supplementary assistance under the *Social Services Act* 1947-1969 or the *Repatriation Act* 1920-1969.

Building Schemes approved so far under the Act are shown in the following table. Typical rents for these units are in the vicinity of \$3.00 a week.

DWELLINGS FOR AGED PENSIONERS SCHEME: APPROVALS

			N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
Number of building schemes approved—									
1969-70	.	.	19	9	..	8	..	1	37
1970-71	.	.	26	13	4	3	9	4	59
Number of units in approved schemes—									
1969-70	.	.	229	316	..	100	..	20	665
1970-71	.	.	269	295	18	50	104	32	768
Estimated cost of approved schemes—									
1969-70	.	.	\$'000 1,299	1,675	..	433	..	130	3,537
1970-71	.	.	\$'000 1,660	2,291	136	238	702	138	5,165

### War service homes

The *War Service Homes Act* 1918-1971 makes provision for assistance to be granted to persons who satisfy the eligibility conditions set out in the Act, to enable them to acquire on concessional terms a soundly constructed home that they would occupy as a residence.

Persons eligible for assistance under the Act include members of the Australian forces and nursing services enlisted or appointed for or employed on active service outside Australia or on a ship of war during the 1914-1918 and 1939-1945 Wars and persons who served in the warlike operations in Korea or Malaya or who have served on 'special service' as defined in the *Repatriation (Special Overseas Service) Act* 1962-1968. 'Special service' includes 'special duty' in an area which by reason of warlike operations or a state of disturbance has been declared a 'special area' under the Repatriation (Special Overseas Service) Act. The areas declared as a 'special area' under the Act are:

Vietnam (Southern Zone) from 31 July 1962;

certain areas of Borneo, Sabah and Sarawak from 8 December 1962 to 30 September 1967;

certain areas of Malaya from 28 May 1963;

Malaysia (the remainder) and Singapore from 7 July 1965 to 30 September 1967;

Vietnamese waters from 1 March 1967.

The categories of eligible persons also include the widow and, in some circumstances, the widowed mother of an eligible person and persons domiciled in Australia and employed in certain sea-going service during the 1914-1918 and 1939-1945 Wars.

The maximum amount of loan or advance which may be granted under the *War Service Homes Act* 1918-1971 is \$9,000. The period of repayment may be up to forty-five years. In the case of a widow or widowed mother of an Australian ex-serviceman, the period may be extended to a maximum of fifty years.

The Director of War Service Homes is responsible for the execution of the War Service Homes Act subject to the directions of the Minister for Housing.

### Operations under the War Service Homes Act

The following tables give details of the operations under the War Service Homes Act in the year 1970-71 and from the inception of the scheme on 6 March 1919 to 30 June 1971. The earliest single year for which details are given in the tables is 1966-67; for earlier years see previous issues of the Year Book. The figures shown include operations in Papua New Guinea and Norfolk Island.

#### WAR SERVICE HOMES ACT: OPERATIONS, AUSTRALIA, 1970-71 AND TO 30 JUNE 1971

		1970-71			From inception to 30 June 1971		
		Eligibility established from service in—			Eligibility established from service in—		
		1914-18 War	1939-45 War, Korea, etc.(a)	Total	1914-18 War	1939-45 War, Korea, etc.(a)	Total
Applications received	No.	323	9,851	10,174	118,820	430,485	549,305
Applications approved	"	237	7,428	7,665	58,359	260,088	318,447
Homes purchased	"	177	4,854	5,031	20,303	137,155	157,458
Homes built, or assistance given to build them	"	12	1,028	1,040	24,144	70,873	95,017
Mortgages discharged	"	27	1,204	1,231	4,310	35,006	39,316
Total homes provided	"	216	7,086	7,302	48,757	243,034	291,791
Transfers and resales	"	26	397	423	9,630	15,425	25,055
Total capital expenditure	\$'000	n.a.	n.a.	61,000	n.a.	n.a.	1,426,750
Total receipts	"	n.a.	n.a.	78,483	n.a.	n.a.	994,527

(a) Korea, Singapore, Malaysia or Vietnam (Southern Zone) and Vietnamese waters.

#### WAR SERVICE HOMES ACT: OPERATIONS, AUSTRALIA 1966-67 TO 1970-71

		Number of—					Total capital expenditure	Total receipts
		Homes provided						
Year	Applications received	Homes purchased (a)	Homes built(b)	Mortgages discharged	Total			
						\$'000	\$'000	
1966-67	. . 10,160	6,007	1,070	1,304	8,381	59,123	67,050	
1967-68	. . 9,664	4,483	807	1,162	6,452	46,019	69,165	
1968-69	. . 10,715	4,668	767	1,105	6,540	50,191	72,622	
1969-70	. . 10,940	4,643	796	1,225	6,664	55,000	77,911	
1970-71	. . 10,174	5,031	1,040	1,231	7,302	61,000	74,483	

(a) Homes purchased with assistance under the War Service Homes Act. (b) Or assistance given to build a home.

**WAR SERVICE HOMES ACT: ADVANCES FOR HOUSING AND NUMBER OF HOMES PROVIDED, STATES AND TERRITORIES, 1966-67 TO 1970-71**

<i>Period or date</i>	<i>N.S.W. (a)</i>	<i>Vic.</i>	<i>Qld (b)</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Total</i>
<b>TOTAL CAPITAL ADVANCED DURING YEAR (\$'000)</b>									
1966-67 .	25,153	15,350	8,430	4,113	4,500	1,170	37	370	59,123
1967-68 .	19,635	11,346	6,800	2,997	3,520	1,195	3	524	46,020
1968-69 .	19,000	14,000	7,908	3,468	3,750	1,350	2	712	50,190
1969-70 .	21,300	14,550	8,900	4,048	4,100	1,300	52	750	55,000
1970-71 .	23,052	16,850	9,721	4,288	4,675	1,530	92	792	61,000

**NUMBER OF SECURITIES IN FORCE**

<i>At end of</i>									
<i>June—</i>									
1967 .	63,011	54,434	23,894	16,583	18,555	4,035	54	998	181,564
1968 .	63,840	54,453	24,279	16,581	18,530	4,066	50	1,051	182,850
1969 .	64,319	54,682	24,642	16,598	18,194	4,124	46	1,103	183,708
1970 .	64,623	54,804	25,021	16,593	18,017	4,168	49	1,164	184,439
1971 .	65,028	55,116	25,446	16,621	17,954	4,245	61	1,236	185,707

**VALUE OF ADVANCES OUTSTANDING (\$'000)**

<i>At end of</i>									
<i>June—</i>									
1967 .	327,969	260,617	105,308	75,402	89,064	19,025	(c)	(d)	877,385
1968 .	335,040	261,680	108,139	75,476	88,508	19,277	(c)	(d)	888,120
1969 .	340,331	264,336	111,744	75,916	87,421	19,791	(c)	(d)	899,539
1970 .	345,620	267,047	115,835	76,575	86,776	20,223	(c)	(d)	912,076
1971 .	352,150	271,295	120,595	77,469	87,091	20,848	(c)	(d)	929,448

**NUMBER OF HOMES PROVIDED**

1966-67 .	3,654	2,164	1,145	575	615	171	5	52	8,381
1967-68 .	2,761	1,564	974	419	487	171	1	75	6,452
1968-69 .	2,492	1,820	1,025	451	486	178	..	88	6,540
1969-70 .	2,526	1,817	1,092	508	454	168	6	93	6,664
1970-71 .	2,785	1,989	1,180	537	512	191	11	97	7,302

(a) Includes Norfolk Island. (b) Includes Papua New Guinea. (c) Included in South Australia. (d) Included in New South Wales.

In addition to the homes provided under the War Service Homes Act and shown above, 2,730 homes, which had been provided originally under the Housing Agreements with the States, have been taken over in accordance with those Agreements.

**Home Savings Grant Scheme**

The administration of the Home Savings Grant Scheme is a function of the Commonwealth Department of Housing. The purpose of the Scheme is to assist young married persons, and young widowed or divorced persons with dependent children, to purchase or build their own homes. A further objective is to increase the proportion of total private savings available for housing purposes by encouraging young people to save with those institutions which provide the bulk of long-term housing finance. The Scheme is governed by the *Homes Savings Grant Act 1964-1971*. The Act authorises the payment of grants from the National Welfare Fund.

The Scheme provides for the payment of grants of \$1 for every \$3 saved by eligible persons under 36 years of age for the first home they own after marriage. The savings must be made over a period of at least three years and held in an approved form. The maximum grant to a married couple, or to husband or wife if only one is eligible, or to a widowed or divorced person, is \$500 on savings of \$1,500 or more. Smaller grants down to a minimum of \$10 are payable on lesser amounts saved.



To be eligible for the grant, a person must be married, widowed or divorced, with one or more dependent children, and must have—or must be married to a person who has—entered into a contract to buy a home or have one built, or begun to build a home as an owner-builder. The person must be under 36 years of age at the time of marriage and, at the date of the contract to buy or build or the date building began, must have either been an Australian citizen or lived in Australia during the three years immediately preceding that date, and must also have saved in Australia in an approved form throughout that period. Those three years are known as the applicant's 'savings years'. The grant is payable in respect of existing homes and homes being built. Flats and home-units may also be eligible provided separate title can be obtained. The value of the home, including the land, the house itself and any other improvements, must not exceed \$17,500, or \$15,000 if the contract to buy or build the home was made, or the building of the home as an owner-builder began, before 27 October 1969. Most homes are eligible, the main exception being homes purchased from State housing authorities which have been built with money advanced by the Commonwealth under the Commonwealth-State Housing Agreement at concessional rates of interest or where the terms of purchase have been subsidised by reason of a Commonwealth Grant to the State under the *States Grants (Housing) Act 1971*.

The main forms of savings acceptable under the Scheme are accounts with savings banks and fixed deposits with trading banks (but not cheque accounts), and deposits with or shares in registered building or co-operative housing societies. Savings spent in connection with the purchase or construction of the home prior to the date of the contract to buy or build the home, or the date building began, are also acceptable. Savings held in savings or trading bank accounts by persons who entered into a contract to buy or build their homes before 27 October 1969 are acceptable only if the accounts had been designated as Home Savings Accounts. The amount of savings that qualify for a grant is the sum of the amounts by which the acceptable savings have increased, each year, up to a limit of \$600 in any one savings year, added to the acceptable savings held at the start of the three-year savings period.

Full details of the Scheme are set out in the official pamphlet *A Grant for Your Home* available from banks, building and housing societies, post offices, and offices of the Commonwealth Department of Housing throughout Australia. Additional statistical information is contained in the Annual Reports by the Secretary, Department of Housing, on the *Homes Savings Grant Act 1964–1971*, which are available from the Australian Government Publishing Service Bookshops.

#### Operations under the Home Savings Grant Scheme

Particulars of applications received and approved during 1970–71 and during the period from 20 July 1964, when the Scheme commenced to operate, to 30 June 1971 are set out below.

#### HOME SAVINGS GRANT SCHEME: OPERATIONS, STATES AND TERRITORIES, 1970-71

		N.S.W.	Vic.	Qld	S.A.(a)	W.A.	Tas.	A.C.T. (b)	Aust.
Applications received	No.	11,916	13,911	5,862	4,129	2,378	1,049	551	39,796
Applications approved(c)	"	10,766	12,751	5,356	3,671	1,736	1,003	495	35,778
Grants approved	\$'000	4,771	5,745	2,311	1,588	716	422	210	15,763
Average grant approved	\$	443	451	431	432	413	421	425	441
Expenditure from National Welfare Fund	\$'000	4,608	5,496	2,227	1,582	691	397	199	15,200

(a) Includes Northern Territory. (b) Includes Municipality of Queanbeyan, N.S.W. (c) Includes applications received on or before 30 June 1970 and approved after that date.

#### HOME SAVINGS GRANT SCHEME: OPERATIONS, 1966-67 TO 1970-71 AND TO 30 JUNE 1971

Year	Applications received	Applications approved	Grants approved	Average grant approved	Expenditure from National Welfare Fund
			\$'000	\$	\$'000
1966-67	30,829	27,768	11,987	432	11,885
1967-68	34,412	32,518	13,446	414	13,299
1968-69	34,485	30,630	12,704	415	13,015
1969-70	33,699	28,828	12,364	429	12,336
1970-71	39,796	35,778	15,763	441	15,200
<b>Total from 20 July 1964</b>	<b>237,525</b>	<b>210,248</b>	<b>91,122</b>	<b>433</b>	<b>90,431</b>

## Homes qualifying for grants

The following two tables contain particulars of homes in respect of which grants were approved during 1970-71. As grants are payable only to persons under 36 years of age and in respect of homes costing no more than \$17,500 (or \$15,000 if acquired before 27 October 1969), these statistics should not be regarded as being applicable to home owners in general.

**HOME SAVINGS GRANT APPLICATIONS APPROVED(a): MANNER OF ACQUISITION,  
TOTAL VALUE, AND AVERAGE VALUE OF HOMES (INCLUDING LAND)  
STATES AND TERRITORIES, 1970-71**

	N.S.W.	Vic.	Qld	S.A.(b)	W.A.	Tas.	A.C.T.(c)	Aust.
<b>Purchase of house(d)—</b>								
Number of approvals	6,821	7,924	3,080	2,380	898	636	300	22,039
Total value(e) . . \$'000	86,889	97,363	31,150	26,900	11,639	6,715	4,486	265,142
Average value(e) . . \$	12,738	12,287	10,114	11,302	12,961	10,559	14,953	12,031
<b>Purchase of flat or home unit—</b>								
Number of approvals	692	91	32	23	59	2	1	900
Total value(e) . . \$'000	9,664	1,129	391	261	744	25	10	12,224
Average value(e) . . \$	13,966	12,409	12,229	11,365	12,610	12,250	9,600	13,583
<b>Home built under contract—</b>								
Number of approvals	2,941	4,343	2,055	1,193	734	264	169	11,699
Total value(f) . . \$'000	40,706	59,869	24,891	15,908	10,287	3,381	2,574	157,616
Average value(f) . . \$	13,841	13,785	12,113	13,335	14,015	12,805	15,230	13,473
<b>Owner-built home—</b>								
Number of approvals	312	393	189	75	45	101	25	1,140
Total value(g) . . \$'000	3,808	5,110	1,990	944	556	1,289	354	14,051
Average value(g) . . \$	12,206	13,001	10,531	12,581	12,364	12,761	14,160	12,325
<b>All homes—</b>								
Number of approvals	10,766	12,751	5,356	3,671	1,736	1,003	495	35,778
Total value . . \$'000	141,068	163,470	58,424	44,013	23,226	11,409	7,423	449,033
Average value . . \$	13,103	12,820	10,908	11,989	13,379	11,375	14,997	12,551

(a) Includes applications received on or before 30 June 1970 and approved after that date. (b) Includes Northern Territory. (c) Includes Municipality of Queanbeyan, N.S.W. (d) Includes previously occupied houses. (e) Usually based on the purchase price. (f) Usually based on the cost of the land and the contract price of the dwelling. (g) Usually based on the cost of the land and the assessed value of the dwelling.

**HOME SAVINGS GRANT APPLICATIONS APPROVED: METHOD OF FINANCING HOMES  
AND AVERAGE MORTGAGE LOANS, STATES AND TERRITORIES, 1970-71**

State or Territory	Method of financing homes					
	With first mortgage loan and without second mortgage loan	With first and second mortgage loans	Others(a)	Total	Average first mortgage loan(b)	Average second mortgage loan
	number	number	number	number	\$	\$
New South Wales . . . . .	9,001	1,388	377	10,766	9,214	2,394
Victoria . . . . .	10,134	1,813	804	12,751	8,551	2,063
Queensland . . . . .	4,777	347	232	5,356	7,807	1,853
South Australia(c) . . . . .	2,592	919	160	3,671	8,305	1,964
Western Australia . . . . .	1,274	295	167	1,736	9,762	2,267
Tasmania . . . . .	843	104	56	1,003	8,224	2,000
Australian Capital Territory(d)	99	394	2	495	8,170	3,911
<b>Australia . . . . .</b>	<b>28,720</b>	<b>5,260</b>	<b>1,798</b>	<b>35,778</b>	<b>8,657</b>	<b>2,268</b>

(a) Homes financed without mortgage loan. Includes homes financed from the applicants' own resources only, with personal or unsecured loans, purchased under a terms contract of sale, etc. (b) Includes homes financed with and without second mortgage loans. (c) Includes Northern Territory. (d) Includes Municipality of Queanbeyan, N.S.W.

## Housing loans insurance scheme

The Housing Loans Insurance Corporation was established by the *Housing Loans Insurance Act* 1965-66 to insure approved lenders against losses arising from the making of housing loans. The main purpose of the activities of the Corporation is to assist people to borrow, as a single loan, the money they need and can afford to repay to obtain a home suited to their requirements.

The Corporation will insure loans of up to \$30,000. The maximum loan to valuation ratio is 95 per cent for loans for the purchase or construction of homes (90 per cent for home units). A once-and-for-all premium of 1.5 per cent of the amount of the loan is charged by the Corporation for the insurance of loans representing 90 per cent or more of valuation. The premium rate falls progressively to a minimum of 0.25 per cent on loans of less than 70 per cent of valuation. The premium normally is paid by the borrower, but lenders may agree to add it to the amount of the loan for repayment by the borrower over the duration of the loan. The maximum period for repayment of a loan on the purchase or construction of a home is forty years. At February 1972 the maximum rate of interest on loans being insured by the Corporation was 8.25 per cent per annum.

The Corporation insures loans for purposes other than the purchase or construction of a dwelling. These include alterations, extensions or improvements to a dwelling. An insured loan may be made only by an approved lender. Approved lenders are appointed by the Corporation from within approved classes of lenders specified by the Minister for Housing. The approved classes include banks, building and housing societies (permanent and terminating), friendly societies, life and general insurance companies, trustee companies, superannuation and other retirement funds, mortgage management companies and solicitors. The Corporation commenced its operations in November 1965. By the end of December 1971 the value of loans insured had amounted to \$737 million.

### State housing authorities

The following paragraphs describe briefly the organisation of the various State housing authorities and their activities in the fields of home construction and provision of homes on a rental basis (*see* pages 219–22 for their financial advances to persons wishing to purchase or build a home). For summarised figures of total government construction of houses and flats, *see* pages 200, and 203. For a fuller description of the activities of State housing authorities and their financial advances to home purchasers or builders *see* Year Book No. 53, pages 283–91.

*New South Wales—The Housing Commission of New South Wales.* The Housing Commission of New South Wales was constituted in 1942, its principal function being the provision of low-cost housing for rental or sale to persons in the lower or moderate income groups.

Advances from the Commonwealth have provided most of the Housing Commission's capital funds and by 30 June 1971 had aggregated \$569,664,000 of which \$64,162,000 had been repaid. Other net funds of the Commission at 30 June 1971 comprised repayable advances from the State, \$18,572,000, public loans raised by the Commission, \$1,600,000, grants from the Commonwealth, \$2,239,000, grants from the State, \$19,027,000 (including \$8,955,000 from consolidated revenue and \$10,000,000 from taxes on poker machines), provision for maintenance of properties, \$4,896,000, and accumulated surplus, \$44,927,000. In addition, the Commission owed \$9,625,000 to creditors, mainly for purchase of land and work-in-progress. These funds were represented by fixed assets, \$601,940,000 (including \$199,166,000 debtors for purchase of homes) and current assets, \$4,448,000. In 1970–71, the Commission's income was \$45,835,000 (including rent \$29,851,000 and interest \$9,973,000), expenditure \$39,340,000 (interest, \$19,378,000), and capital expenditure (including construction of houses for sale on rental purchase terms) \$56,632,000.

Most of the permanent dwellings provided by the Commission have been erected under the Commonwealth-State Housing Agreements. In 1970–71, 4,633 houses and flats, valued at \$34,773,000, were completed for the Housing Commission by private builders on contract to the Commission.

Upon request by other State Departments the Housing Commission will erect houses for employees of those Departments, the Departments providing the necessary lands and funds. In addition, the Commission erects (with State funds) dwellings for employees of industries connected with decentralisation and development. Specially designed units are erected by the Housing Commission to provide dwellings for elderly persons at rentals within their means. The rents of these units, as at 30 June 1971, are approximately \$2.55 a week for elderly single persons and \$4.00 a week for elderly couples, and 5,378 units had been completed at 30 June 1971.

Applicants for Commission housing may elect either to purchase or to rent the dwelling allocated to them. Terms of sale provide for a minimum deposit of \$100 with repayments spread over a maximum period of forty-five years. Further, those tenants who originally elect to rent may subsequently purchase the dwellings occupied by them on similar terms. Applicants may also apply to have a standard type of dwelling erected on their own block of land.

*Victoria—Housing Commission, Victoria.* The Housing Commission, Victoria, was set up in 1938 as a result of the Housing Act of the previous year. The objects of the Commission as now laid down are the improvement of existing housing conditions; the provision of suitable rental housing for persons displaced by slum reclamation or living under unsatisfactory conditions, and for other



eligible persons; the sale of houses to eligible persons and the making of advances to such persons to enable them to own their homes; the development of land for housing and related purposes; and the responsibility of maintaining housing standards. Since the signing of the 1945 Commonwealth-State Housing Agreement the construction of dwellings has been financed by the Commonwealth Government and Commission Funds.

At 30 June 1971 the Housing Commission had completed 1,328 dwelling units under the State Housing Scheme, and 68,360 dwelling units under Commonwealth-State Agreements and Commonwealth Grant. Specially designed dwelling units are erected by the Commission to provide dwellings for elderly persons at rentals within their means. To 30 June 1971, 4,342 units have been completed.

*Queensland—The Queensland Housing Commission.* The Queensland Housing Commission was established in 1945 to assist in meeting the housing shortage. In addition, the Commission was empowered to build houses itself, either for sale or for rental.

The Housing Commission finances its operations through two Treasury Trust Funds—the Queensland Housing Commission Fund and the Commonwealth-State Housing Fund. In addition, a Home Builders' Deposit Trust Fund is available to assist eligible persons to accumulate money to acquire land and erect a Commission dwelling thereon, or to purchase a dwelling under contract of sale conditions. Total disbursements by the Commission for the year 1970–71 amounted to \$35,881,646, representing \$9,114,163 from the Queensland Housing Commission Fund and \$26,767,483 from the Commonwealth-State Housing Fund, while the Home Builders' Deposit Fund had a nil balance at 30 June 1971.

During 1970–71 the Commission completed 1,730 house units, bringing the total completions under all schemes since the revival of housing construction in 1944–45 to 41,716. Of this number 24,481 houses, or 58.7 per cent, were for home ownership, and 17,235, or 41.3 per cent, were for rental.

In the field of rental housing the Commission administers and acts as the constructing authority under the Commonwealth-State Housing Agreements. Operating under the provisions of '*The State Housing Acts, 1945 to 1966*' the Commission, through its scheme of workers' dwellings, makes advances for the construction of dwellings to eligible persons who own a suitable building site. The number of workers' dwellings completed during 1970–71 amounted to 200, making a total of 30,986 completions since the inception of the scheme. The Commission also has power to make advances, secured by mortgage, to firms for housing of employees. The Commission has power to sell houses under contract of sale conditions. Contract of sale agreements were made to purchase 767 of the Commission's houses during 1970–71.

*South Australia—The South Australian Housing Trust.* The South Australian Housing Trust operates under the South Australian Housing Trust Act, 1936–1971 and the Housing Improvements Act, 1940–1971 for the purpose of providing houses for families of limited means. Houses are built for both rental and sale, and to 30 June 1971, 70,306 had been completed throughout the State, of which some 34,330 had been built and sold under various schemes. At 30 June 1971 the rents of five-roomed (i.e. three bedrooms) double-unit houses ranged from \$10.00 a week for houses of an older type to \$11.50 a week for houses then being completed. Single units rent ranged between \$12.00 and \$18.50. Two- and three-storey groups of flats with weekly rentals ranging from \$9.00 to \$17.75 per flat have been built in the Metropolitan Area; of these 1,725 flats are situated in the Metropolitan Area and 259 at Elizabeth. In 1953 the Trust began building cottage or pensioner flats for elderly people. At 30 June 1971 it had built 1,144 cottage flats from its own resources and an additional 758 for charitable and non-profit organisations. As an agent for the South Australian Government, the Trust also constructs houses in country areas for married couples of limited means. Rents charged in these cases are below economic rents.

During 1962–63 the Trust commenced construction of rental-purchase houses. The aim of this scheme is to provide less expensive houses for the lower income groups. It is expected that such houses will, to some extent, replace double-unit type rental houses. The Trust has also undertaken the construction of houses for various State Government Departments which need to house staff in country districts. In addition, 232 houses in country areas have been built for the State Department of Aboriginal Affairs. The letting of these houses to selected Aboriginal families is administered by the Department. In order to assist primary producers the Trust will erect houses on the applicant's own land for his own use or that of his employees, either using local materials or transporting pre-fabricated houses to the site.

*Western Australia—State Housing Commission of Western Australia.* The activities of the State Housing Commission extend throughout the whole State. In addition to construction of a variety of dwellings for its own rental and purchase programme as determined under the State Housing Act, the

Commonwealth-State Housing Agreements prior to 30 June 1971 and subsequently the *States Grants (Housing) Act 1971*, its activities include;

The management as agent of the Commonwealth War Service Homes Scheme in Western Australia;

Construction of houses for other Government Departments (both Commonwealth and State also semi- and local government authorities) in Western Australia;

Construction and maintenance of houses for the Government Employees' Housing Authority.

At 30 June 1971, the Commission had completed under all schemes since 30 June 1944, a total of 53,876 units of accommodation throughout the State.

During the twelve months ended 30 June 1971, 3,499 units of accommodation were completed; metropolitan area, 2,700; country 518; and north of 26th parallel, 281; and a further 2,069 units were under construction.

To conserve land resources and to make the most economical use of available facilities such as sewerage, water, and power, the Commission has programmed construction in the metropolitan region to include flats and terrace houses, in addition to individual homes.

At 30 June 1971, medium density accommodation valued at \$7,274,000 (representing 850 units) was either under construction or out to tender throughout the metropolitan region.

The greatly increased rate of construction in recent years has created a high demand for serviced building sites, particularly in the metropolitan area, with a consequential rise in land prices.

Despite the high rate of home construction and the ready availability of private project-built homes for purchase, the demand—particularly from the lower income groups—continues to be high. A large proportion of this demand is directed to the State Housing Commission.

Building societies are a major source of housing finance in Western Australia. At 30 June 1971 it was estimated that at least 35,000 homes were being purchased with the assistance of building society finance, and the assets of all societies were about \$305 million. Currently, fifteen permanent societies and 339 terminating societies are operating. Under the provisions of the Commonwealth-State Housing Agreement at least 30 per cent of the loan funds is made available each year to building societies and other approved institutions. Although this Agreement was replaced from 1 July 1971 by new arrangements under the *States Grants (Housing) Act 1971*, this provision is effectively maintained.

Complementing the activities of the building societies, is the Housing Loan Guarantee Act, which provides means for financial institutions to make large-scale loans to lending institutions with full security by way of a 100 per cent guarantee. The Act was introduced in 1957 and with subsequent amendments, now enables lending institutions to make high ratio advances to families of low and moderate means without any additional charge. The interest rate charged to the purchaser may not exceed 7.5 per cent per annum reducible. The maximum loan permitted is \$10,000 in metropolitan and country areas, and \$13,000 in areas north of the 26th parallel; and the value of the house, excluding land, must not exceed \$10,000 in the metropolitan area; \$11,000 in country areas; and \$17,500 in areas north of the 26th parallel.

*Tasmania—The Housing Department.* The Housing Department was established in July 1953 and is responsible for administering that portion of the *Homes Act 1935* which relates to the acquisition and development of land for housing purposes and the erection of homes for rental and ultimate sale, and the *Casual Worker's and Unemployed Persons' Homes Act 1936*.

During 1970-71, 631 dwellings were completed. Construction since 1944 has totalled 12,649 dwelling units, comprising 11,981 single units (9,536 of timber), 350 elderly persons' flatettes, 22 maisonettes, and 296 multi-unit flats.

Flats, maisonettes, villa units, and elderly persons' homes are for rental only. Single unit dwellings are normally allotted on a purchase contract basis, but in some special cases may be occupied on a rental basis. The weekly rental of a newly erected three-bedroom timber house in the Hobart metropolitan area approximated \$19.80 in the June quarter of 1971. In certain necessitous cases rental rebates are allowed. Under the current rental rebate formula, a married couple occupying an elderly persons' unit and whose only income is the age pension pay \$3.80, while a single person solely dependent on the pension pays \$2 a week.

Allotments are usually made on a no-deposit purchase contract basis, repayments being over a maximum term of fifty-three years. Purchase contracts are sometimes surrendered to the Department. Net of surrenders, 8,630 purchase contracts had been entered into by June 1971. The sale price, excluding land, of a new three-bedroom house in the Hobart metropolitan area was approximately \$9,300 in the June quarter of 1971.

**Housing schemes in Commonwealth Territories**

*Northern Territory.* In 1946 control of all government-owned residences in the Territory (excluding those belonging to the Defence Services or Commonwealth Railways, or attached to post offices) was vested in the Administration. The Northern Territory Housing Commission was established in 1959 and operates under authority of the *Housing Ordinance* 1959-1971. The Commission became autonomous on 1 October 1969 and provides rental housing for persons of limited means who are not adequately housed and who are not officers of either the Commonwealth or the Northern Territory Public Service. To 30 June 1971 the Commission had completed a total of 2,682 houses and flats; 1,889 of these are in Darwin (including 490 flats), 508 in Alice Springs (including 61 flats); 136 in Katherine (including 29 flats), and 131 in Tennant Creek (including 15 flats); 6 houses in Pine Creek, 8 houses in Adelaide River and 2 each in Elliot and Mataranka. In addition, 49 houses and 8 flats were taken over from the Department of Defence in Alice Springs; 2 houses in Katherine and 1 house in Tennant Creek were acquired from the Northern Territory Administration. A further 659 houses and 72 flats were under construction.

*Australian Capital Territory.* The Commonwealth Government provides houses and flats for rental to persons employed in the Australian Capital Territory. At 30 June 1971 the Department of the Interior controlled 8,669 houses and 2,022 flats for rental purposes. Government rental houses may be purchased by tenants. From 1 July 1950 to 30 June 1971, 8,400 houses had been sold to tenants.

*Papua New Guinea.* In 1960 the Administration, through the Commissioner for Housing, commenced a housing loans scheme for providing low-cost houses for rental and eventual sale, where possible, to indigenees, mixed race peoples and Asians. This scheme was taken over by the Housing Commission at its inception on 1 July 1968, along with the 323 houses built under the scheme.

A Housing Commission was established to improve existing housing conditions, to provide adequate and suitable housing for letting and sale to persons who are of limited means, to make advances for home purchase, and to develop land for housing. Details of housing constructed are as follows: 323 houses taken over from the Administration on 1 July 1968; 279 houses constructed during the year ended 30 June 1969; 54 houses and 64 flats constructed during the year ended 30 June 1970; 50 houses taken over from the Administration on 1 July 1970; and 481 houses and 64 flats constructed during the year ended 30 June 1971.

**Summary of rental activities of government authorities**

The first of the following two tables shows the revenue from rental for dwellings under control of government housing authorities each year from 1966-67 to 1970-71, and the second, the number of tenants paying rent for dwellings under control of government housing authorities at the end of each year 1966-67 to 1970-71.

**GOVERNMENT HOUSING AUTHORITIES: REVENUE FROM RENTALS**  
**STATES AND TERRITORIES, 1966-67 TO 1970-71**  
(\$'000)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld(a)</i>	<i>S.A.(b)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1966-67	20,823	15,406	6,181	10,915	6,678	1,522	985	3,853	66,363
1967-68	22,779	16,266	6,702	11,603	7,161	1,761	1,103	3,861	71,236
1968-69	24,661	17,207	7,486	12,506	8,003	1,902	1,261	4,137	77,163
1969-70	27,048	18,062	8,403	13,493	8,120	2,008	1,703	4,459	83,296
1970-71	29,851	20,618	9,286	14,300	10,076	2,152	3,387(c)	5,300	94,970

(a) Excludes rentals in respect of tenanted temporary dwellings. (b) Excludes rentals in respect of temporary and emergency dwellings. (c) Includes undercharges in respect of 1969-70.

**GOVERNMENT HOUSING AUTHORITIES: NUMBER OF TENANTS PAYING RENT**  
**STATES AND TERRITORIES, 1966-67 TO 1970-71**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld(a)</i>	<i>S.A.(b)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.(c)</i>	<i>Aust.</i>
1966-67	54,172	35,307	14,046	28,305	17,393	3,451	2,869	9,143	164,686
1967-68	57,643	35,774	14,781	30,012	17,771	3,590	2,824	9,440	171,835
1968-69	60,293	36,403	15,693	31,322	18,340	3,644	2,939	9,904	178,538
1969-70	62,293	37,591	16,202	31,993	19,226	3,741	3,400	10,311	184,757
1970-71	63,983	38,237	17,038	33,378	22,056	3,951	3,710	10,567	192,920

(a) Excludes tenanted temporary dwellings. (b) Excludes temporary and emergency dwellings. (c) Number of occupied dwellings at 30 June.



### Advances to home purchasers

Many prospective home purchasers wish to borrow for the purpose of constructing or purchasing their own homes. Usually the loan is covered by way of mortgage of the home to be constructed or bought. Such loans are provided from a number of private sources and from agencies owned or guaranteed by the State or Commonwealth Governments. The information in this section concerns the direct loans made to home purchasers by the more important institutional lenders. Loans to institutions which in turn lend moneys to home purchasers and loans to contract builders, etc. are excluded as far as possible. The loans may be for the construction of new dwellings, the purchase of existing dwellings, for additions, renovations, etc., as first or subsequent mortgages, overdrafts and so on. While figures of all loans to home purchasers are not available, the institutions mentioned account for a significant proportion of total loans. Details of the terms and conditions of lending are given, together with available information on the number and value of loans made.

#### State authorities and agencies

##### *New South Wales*

*Rural Bank of New South Wales—Sale of Homes Agency.* A Sale of Homes Agency was established in 1954 to arrange for the sale on terms of houses erected by the Housing Commission of New South Wales. The Agency's operations began with the sale to selected purchasers of 100 houses made available by the Commission during 1954-55 and 1955-56. The sales were made on the basis of 10 per cent deposit and repayment of the balance over a maximum period of forty years, with interest at 4.5 per cent per annum. Total advances under that scheme amounted to \$646,648; at 30 June 1971 the advances outstanding amounted to \$308,584 in respect of 69 houses.

Since 1956 the Sale of Homes Agency has acted as the agent of the Housing Commission in arranging the sale on terms of houses erected under the Commonwealth-State Housing Agreements. The terms of sale provide for a minimum deposit of \$100 and repayment of the balance over a maximum period of forty-five years, with interest rates, since the inception of the scheme, ranging from 4.25 to 6.75 per cent per annum. Particulars of the advances made by the Agency in connection with the sale of houses erected under the 1956, 1961, and 1966 Agreements are given in the following table.

**RURAL BANK OF NEW SOUTH WALES—SALE OF HOMES AGENCY  
ADVANCES FOR HOMES SOLD UNDER THE 1956, 1961 AND 1966  
COMMONWEALTH-STATE HOUSING AGREEMENTS  
1966-67 TO 1970-71**

Year	Advances during year		Advances outstanding at end of year(a)	
	Number of houses	Amount	Number of houses	Amount
		\$'000		\$'000
1966-67 . . .	1,073	9,005	17,763	119,077
1967-68 . . .	1,444	12,866	18,724	127,288
1968-69 . . .	1,227	11,167	19,406	133,363
1969-70 . . .	1,751	17,074	20,523	144,511
1970-71 . . .	2,080	22,144	21,953	160,426

(a) Comprises principal outstanding and loan charges due but not paid.

The Sale of Homes Agency also acts as agent for the Housing Commission in arranging the sale of houses erected by the Commission on applicants' land. Under this scheme persons who have established a housing need may apply to the Commission to have a standard-type dwelling erected on their own land. The houses are sold, at a price equivalent to their capital cost, on the same terms as for houses erected under the 1956 to 1966 Housing Agreements. Up to 30 June 1971, 613 houses had been built under this scheme at a cost of \$4,556,455, the balance of indebtedness at that date was \$3,872,216.

*Rural Bank of New South Wales—Other loans.* The Rural Bank of New South Wales provides assistance to individuals for the erection or purchase of homes and for other approved purposes associated with homes. Advances are based on the bank's official valuation of the dwelling. The rate of interest on long-term loans for housing purposes is 5.75 per cent per annum.

*Victoria*

*Housing Commission of Victoria.* Very few houses were sold by the Commission until 1954 but the added emphasis given to the construction of houses for private ownership by the amendments in the Commonwealth-State Housing Agreement in 1955-56 had the effect of substantially increasing the number of houses sold.

Of the 69,688 dwelling units built up to 30 June 1971, under the State Housing Scheme, the Commonwealth-State Agreements and Commonwealth Grant, a total of 31,451 houses have been sold (16,891 in the metropolitan area and 14,560 in the country).

*Home Finance Trust.* In 1956 a Home Finance Trust was established with the object of receiving money from institutions and others in order to make loans for the erection or purchase of houses. Applicants for loans must declare that they intend to use the houses as homes for themselves, their families and dependants.

Loans granted are on the basis of a first mortgage over the house. Loans are not to exceed ninety-five per cent of the value of the security (house and land) and are not made if the value of the security exceeds \$14,000. The house must not have been erected more than two years before the date of mortgage. Repayment of loans may be made over a maximum period of thirty years, with interest charges determined by the Trust. At 30 June 1971, 3,796 loans totalling \$26,622,559 were outstanding.

In 1963 the Trust was empowered to make housing loans on the security of second mortgages, subject to conditions similar to those applying to the first mortgage loans, except that the maximum term for repayment of a loan is ten years and no restriction is placed on the percentage of loan to valuation. At 30 June 1971, 1,831 second mortgage loans were outstanding, the amount involved being \$2,451,210.

(See Savings Banks, page 222, for activities of the State Savings Bank of Victoria).

*Queensland*

*Queensland Housing Commission.* The present maximum advance allowable under the Acts is \$9,000 for a timber, brick veneer, brick, or concrete building. The rate of interest charged on new advances was increased from 5.5 per cent to 6.125 per cent per annum from 3 November 1969, and was further increased to 7.125 per cent per annum from 30 July 1970. Repayment may be made at the option of the borrower over either a thirty year or a forty-five year period.

*Workers' dwellings.* From 4 October 1962 the maximum advance under this scheme was increased to \$7,000 for all types of workers' dwellings. This was increased to \$8,000 from 2 June 1966 and to \$9,000 from 22 May 1969. Total advances made for dwellings since operations commenced in 1910 to 30 June 1971 amounted to \$72,631,172.

*South Australia*

*South Australian Housing Trust Sales Schemes.* Prospective purchasers of Housing Trust houses (other than Rental Purchase houses) may purchase either by paying cash or by paying a deposit and arranging for a loan on security of a first mortgage from any of the recognised lending authorities. In cases where the deposit and the first mortgage so raised are insufficient, the Trust may advance the balance of the house price on security of a second mortgage, the term of which is usually coterminous, but not exceeding 30 years. The interest rate is 7.75 per cent and the principal is adjusted quarterly. During 1970-71 the Trust commenced 353 second mortgages valued at \$557,412. At 30 June 1971 second mortgages totalled 8,750 and the balance outstanding at that date was \$10,000,000. A minimum deposit of \$100 is required for houses built under the Rental Purchase Scheme. The balance of the purchase price is repayable to the Trust in weekly instalments over periods up to 40 years at 6.25 per cent interest per annum.

*State Bank of South Australia.* The State Bank, together with the Housing Trust, are the principal agents of the State Government for the distribution through the Home Builders' Fund of moneys received under the Commonwealth-State Housing Agreement. During 1970-71 the Bank opened 1,914 new accounts worth \$16,312,274 in the Home Builders' Fund. The balance of loans in this Fund outstanding at 30 June 1971 totalled \$104,977,085. In addition, during 1970-71, \$152,428 was advanced to the public under the Advances for Homes Act, 1928-1970, which is administered by the Bank on behalf of the State Government. Under this Act 18 new accounts were opened during 1970-71, leaving a balance outstanding at 30 June 1971 of \$20,660,854. The present maximum housing loan under either of these schemes is \$9,000, repayable over a period not exceeding fifty years at a rate of interest of 6.75 to 7.25 per cent per annum calculated on monthly balances.

(See Savings Banks, page 223 for activities of the Savings Bank of South Australia.)

*Western Australia*

*State Housing Commission of Western Australia.* Under the State Housing Act (and the Commonwealth-State Housing Agreement up to 30 June 1971) the maximum loan is \$8,000 by way of mortgage, while under contract of sale the maximum is \$6,500 on the building plus the value of the land in the metropolitan area, and greater amounts in rural areas, depending on the circumstances.

To proceed under the mortgage conditions, a deposit of not less than 10 per cent is required, but under contract of sale the deposit may be as low as \$200. The interest rate on all advances is 5.375 per cent per annum and the repayment period is forty-five years. The income eligibility figure varies according to the movement of the basic wage, and currently an applicant in the Metropolitan Area cannot have an income exceeding \$2,956 a year, plus \$100 for each dependent child under twenty-one years of age. For the country, the corresponding amount is \$3,468 per annum plus \$100 for each dependent child under twenty-one years, and north of the twenty-sixth parallel the Minister may allow families with an income of up to \$4,535 plus \$100 for each dependent child under twenty-one years of age to be given financial assistance. A second-mortgage scheme exists under the State Housing Act, which provides that assistance be limited to those applicants who are building or purchasing new homes, the cost of which, excluding land, does not exceed \$10,000. The Commission limits the second mortgage to a maximum of \$2,000.

(See Savings Banks, page 223, for activities of the Savings Bank Division of The Rural and Industries Bank of Western Australia.)

*Tasmania*

*Housing Department.* The interest rate on purchase contract loans as at 1 July 1971, was 6 per cent. To be eligible for a house on purchase contract terms an applicant must be married or about to be married, or have dependants for whom it is necessary to provide a home. The number of loans outstanding at 30 June 1971 was 7,770, and the amount outstanding \$55,891,834.

*Agricultural Bank of Tasmania.* The Agricultural Bank, as an approved institution under the Commonwealth-State Housing Agreement, receives part of those funds allocated for advances to home builders. To be eligible for a loan an applicant must be married or about to be married, be over the age of twenty-one, and own a block of land. The maximum amount of an advance to an applicant is \$9,000 for all types of houses in certain areas, provided that the total advance does not exceed ninety per cent of the Bank's valuation of land and dwelling. Advances to borrowers are repayable by equated instalments over thirty years. Advances made as from 1 March 1972 were at an interest rate of 6 per cent per annum.

During 1970-71, 322 advances were approved, valued at \$2,840,000. Since November 1945 a total of 4,609 loans amounting to \$30,087,000 has been approved, of which 3,516 have been for erection of dwellings and 1,093 for the purchase of existing homes. Total advances outstanding at 30 June 1971 amounted to \$20,939,000. These figures exclude advances to building societies.

**Commonwealth authorities and Territories***Department of Housing*

In December 1963 the Department of Housing was created, and to it were transferred the functions and staff of the War Service Homes Division, and the Housing and Building Industry Branch of the Department of National Development. Further details relating to the Department of Housing may be found on page 83 of Year Book No. 50.

*War Service Homes*

For details of the operations under the War Service Homes Act, see pages 210-12.

*Northern Territory*

*Loans Scheme.* This scheme was commenced in 1953 and is administered by the Home Finance Trustee under the *Housing Loans Ordinance* 1949-1967. Advances may be made for the erection of a house, the purchase or enlargement of an existing house, the completion of a partially erected dwelling, or the discharge of a mortgage already existing. Loans are provided on a deposit of 5 per cent of the first \$4,000 and 10 per cent of the balance of the Trustee's valuation up to a maximum of \$9,000. The rate of interest charged is 7.25 per cent per annum reducible to 6.25 per cent per annum if instalment payments are made by the due date. The maximum period of repayment is forty-five years for brick houses and twenty-five years for other houses. Up to 30 June 1971, 1,315 loans totalling \$7,460,150 had been approved. These were for: erection, 785; purchase, 391; enlargement or completion, 81; discharge of mortgage, 58.

*Sales Scheme.* Tenants of government-owned houses under the control of the Administration may purchase the dwellings they occupy either for cash or on terms requiring a minimum deposit of 5 per cent of the purchase price with repayments over a maximum period of forty-five years including interest at 6.25 per cent per annum.



*Housing Commission Sales Scheme.* Since the November 1963 amendment of the *Housing Ordinance* 1959-1971 the Housing Commission has been permitted to sell its houses to tenants in occupation. The terms require a minimum cash deposit of \$200 and repayment of the remainder of the loan over a period not exceeding forty-five years; there is no prescribed limit to the amount of the loan and the rate of interest is fixed by the Commission from time to time.

#### *Australian Capital Territory*

Loans may be granted by the Commissioner for Housing to enable persons to purchase or build a new house in the Australian Capital Territory. Where the Commissioner's valuation does not exceed \$4,000 the maximum loan may not exceed ninety-five per cent of the valuation. If the Commissioner's valuation exceeds \$4,000, the maximum loan is ninety-five per cent of the first \$4,000 and ninety per cent of the balance (but in no case can the amount lent exceed \$8,000). Repayment may be made over a maximum period of forty-five years. The current rate of interest is 7.25 per cent per annum with a concession of 1 per cent for payments made on or before the due date. At 30 June 1971, 8,197 houses were under mortgage to the Commissioner.

Government rental houses may be purchased by tenants. The basis of the sale is a minimum deposit of 5 per cent of the purchase price fixed by the Department of the Interior with no limit to the amount which may be held on mortgage from the Department. Repayment of the amount covered by mortgage may be made over a maximum period of forty-five years. The interest rate is 7.25 per cent per annum with a concession of 1 per cent for payment made on or before the due date. To 30 June 1971, 8,400 houses had been sold to tenants.

#### *Papua New Guinea*

Under authority of the *Housing Loans Ordinance* 1953-1963, the Commissioner for Housing may make advances to any members of the community for the erection of a house, the purchase or enlargement of an existing house, the completion of a partially erected dwelling, or the discharge of a mortgage already existing. The Commissioner's responsibilities were transferred to the Housing Commission on 1 July 1968. The maximum loan is \$7,000 or 90 per cent of the Commission's valuation whichever is the lesser. The maximum period of repayment is twenty-five years for all dwellings. The effective rate of interest is currently 7.25 per cent per annum, or 1 per cent above the borrowing rate of the funds. Up to 30 June 1971, 574 loans totalling \$3,017,635 had been approved.

#### **Savings banks**

All savings banks lend funds for housing to both individuals and building societies. Details of savings banks housing finance transactions during the years 1969-70 and 1970-71 are shown in the following table. (See the chapter Private Finance for further details.)

#### **SAVINGS BANKS: HOUSING LOANS APPROVED AND BALANCES OUTSTANDING TO INDIVIDUALS, STATES AND TERRITORIES, 1969-70 AND 1970-71**

(\$'000)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(a)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>	<i>Total</i>
<b>LOANS APPROVED DURING YEAR</b>								
1969-70	140,535	190,079	52,612	46,164	27,200	9,187	3,404	469,181
1970-71	180,112	200,372	65,486	54,168	47,283	14,085	5,701	567,207
<b>BALANCES OUTSTANDING AT END OF YEAR</b>								
1969-70	524,010	748,483	196,498	254,401	120,144	45,487	9,258	1,898,281
1970-71	588,020	826,435	226,709	275,201	145,274	50,879	12,389	2,124,907

(a) Includes Northern Territory.

*State Savings Bank of Victoria.* The Bank grants long-term loans to depositors to enable them to build, purchase or improve homes. These loans are granted by both the Credit Foncier and Savings Bank Departments.

The maximum proportion of valuation to be granted as Credit Foncier loan is eighty per cent and the maximum loan is \$8,000. Interest is 6.25 per cent and the term of the loan is ten years, subject to renewal. The maximum proportion of valuation granted as Savings Bank Department loan is seventy-five per cent and the maximum loan is \$12,000. For a property to be occupied by the borrower the interest rate is 6.75 per cent to 7.25 per cent, depending on the amount of the loan. The above

conditions are those current as at 27 January 1971 but are subject to review and alteration by the Bank at any time. During the year 1970-71 the Bank advanced \$80,300,000 to 9,563 borrowers in addition to \$42,590 to Co-operative Housing Societies and \$250,000 to the Home Finance Trust. At 30 June 1971 the total debt of 75,981 individual borrowers was \$432,900,000, while indebtedness of Co-operative Housing Societies and the Home Finance Trust amounted to \$10,700,000 and \$9,700,000 respectively.

*Savings Bank of South Australia.* The bank grants mortgage loans for the building or purchase of houses for personal occupation, the maximum loan available being \$8,500 for existing houses or \$9,000 for houses not previously occupied or those to be erected. Normally advances are made up to 85 per cent of the Bank's valuation or 90 per cent where the borrower elects to insure the loan with the Housing Loan Insurance Corporation and pay the necessary premium which may be added to the loan if so desired.

The maximum loan period is thirty years at a rate of interest of 6.75 per cent per annum; this rate is subject to review at any time. During 1970-71 the Bank advanced \$15,699,839 by way of housing loans, the number of new loans totalling 1,907. At 30 June 1971 there were 26,966 housing loans current with a balance outstanding of \$141,179,699.

*Rural and Industries Bank of Western Australia (Savings Bank Division).* The Rural and Industries Bank of Western Australia is authorised by the *Rural and Industries Bank Act, 1944-1966* to make loans from moneys on deposit with its Savings Bank Division to a person or body for the purchase or erection of a dwelling. It is the policy of the Bank to provide funds for housing primarily for occupancy by the borrower. There is no fixed limit on the amount of a loan. At 30 June 1971 loans up to \$8,000 attracted interest at 6.5 per cent per annum reducible, loans up to \$10,000 7 per cent per annum reducible, whereas loans above \$10,000 attracted varying rates of interest dependent upon the particular circumstances. Loans may be approved up to terms of thirty years but the average term of housing loans is eighteen to twenty years.

The bank undertakes the sub-division and development of land and the erection of homes which are sold under conditions which ensure that the purchasers are genuine home seekers. This activity commenced in May 1967. The number of homes built to 30 June 1971 was 322, whilst another 15 were under construction. In addition, 252 building lots (under certain restrictions) were made available to project builders for the erection and sale of houses. A further 900 building lots have been auctioned to the public under restrictions designed to favour genuine home seekers.

### Trading banks

Apart from loans by certain State banks as Government agencies (*see* pages 219-21) advances for housing to individuals are also provided by the trading banks. Amounts outstanding in respect of advances to individuals for housing purposes made by the major trading banks were \$295 million on the second Wednesday of July 1971 (*see* the chapter Private Finance for further details).

### Life insurance companies

The life insurance companies are another source of funds for housing. Details of new loans paid over during the twelve months ended June 1967 to 1971 and amounts outstanding at end of June 1967 to 1971, are given in the following table.

**LIFE INSURANCE COMPANIES: HOUSING LOANS PAID OVER AND AMOUNTS OUTSTANDING, STATES AND TERRITORIES, 1966-67 TO 1970-71**  
(\$'000)

	(a)1966-67	(a)1967-68	(a)1968-69	1969-70	1970-71
Housing loans paid over during period—					
New South Wales . . . .	22,486	23,729	29,130	33,151	29,686
Victoria . . . . .	16,843	19,471	22,549	23,791	21,145
Queensland . . . . .	(b)4,856	(b)4,918	(b)6,098	6,135	6,921
South Australia . . . . .	(c)4,371	(c)4,559	(c)5,366	5,415	6,033
Western Australia . . . . .	4,157	5,331	6,446	5,283	5,335
Tasmania . . . . .	1,321	1,171	1,530	1,588	1,728
Northern Territory . . . . .	(c)	(c)	(c)	132	40
Australian Capital Territory . . . . .	945	631	666	874	991
<b>Total . . . . .</b>	<b>(b)54,979</b>	<b>(b)59,810</b>	<b>(b)71,784</b>	<b>76,369</b>	<b>71,879</b>
Amounts outstanding on housing loans at end of period(b) . . . . .	365,848	378,151	397,958	422,284	442,545

(a) Excludes the business of the State Government Insurance Office of New South Wales and the Queensland State Government Insurance Office. (b) Includes Papua New Guinea. (c) Loans made in Northern Territory included in South Australia.

**Registered building societies**

There were 5,064 registered building societies operating in Australia during the year ending 30 June 1970 of which 182 are permanent societies and the remainder terminating societies. The permanent societies are, in the main, investment societies which make loans for housing purposes, usually on credit foncier terms, and obtain their funds from share capital, deposits and borrowings from banks and other lending institutions. The terminating societies make loans to members from funds obtained from lending institutions (usually government guaranteed), members' subscriptions and, since 1956, from monies provided under the Commonwealth-State Housing Agreements. Details of new loans paid over and net advances outstanding for each of the years ended June 1966 to 1970 are given in the following table (*see also* the chapter Private Finance).

**REGISTERED BUILDING SOCIETIES: STATES, 1965-66 TO 1969-70**  
(\$'000)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
<b>LOANS PAID OVER DURING YEAR</b>							
1965-66 . .	90,635	34,076	18,560	3,521	12,611	5,425	164,828
1966-67 . .	112,738	36,493	20,641	4,412	14,031	6,338	194,653
1967-68 . .	142,084	49,456	29,369	5,121	24,436	9,553	260,011
1968-69 . .	176,282	53,059	38,044	7,901	48,650	7,914	331,850
1969-70 . .	225,151	54,212	49,276	12,135	91,481	12,008	444,263
<b>NET ADVANCES OUTSTANDING(a) AT END OF YEAR</b>							
1965-66 . .	441,677	223,595	74,659	17,239	52,183	23,767	833,120
1966-67 . .	507,093	236,144	85,730	19,470	61,015	26,659	936,111
1967-68 . .	593,438	259,574	103,194	22,388	77,254	32,204	1,088,052
1968-69 . .	715,029	284,894	127,830	27,529	113,812	35,542	1,304,636
1969-70 . .	860,322	309,186	162,499	36,466	189,482	42,603	1,600,558

(a) Net of borrowing members' funds.

**Other lenders**

Little information is available on advances made by other lenders such as superannuation and other trust funds, private finance and investment companies, etc. In South Australia advances on first mortgage made by the South Australian Superannuation Fund are granted on a credit foncier basis. Loans are limited to 70 per cent of value unless repayments are insured with an approved insurer, in which case loans of up to 90 per cent of value are made. The interest rate may be varied from time to time, the present minimum rate being 7.75 per cent per annum. The maximum term is 30 years for homes of solid construction, and 20 years for timber-framed homes. At 30 June 1971 there were 5,127 loans current, the principal outstanding totalling \$23,943,157. During 1970-71 the value of advances made was \$1,416,900.



## CHAPTER 10

### LABOUR, WAGES AND PRICES

For particulars of the Farm Production Price Index, see the chapter Miscellaneous. For current information on the subjects dealt with in this chapter, see the *Monthly Review of Business Statistics* (1.4), the *Digest of Current Economic Statistics* (1.5) (monthly), and the *Quarterly Summary of Australian Statistics* (1.3), also the mimeographed statements *Wage Rates and Earnings* (6.16), *Consumer Price Index* (9.1), *Wholesale Price Index of Materials used in Building other than House Building* (9.6), *Wholesale Price Index of Materials used in House Building* (9.9), *Wholesale Price Indexes—Price Index of Electrical Installation Materials* (9.5), and *Export Price Index* (9.2). For further information on these subjects, except the Export Price Index, see the *Labour Report* (6.7) issued by this Bureau.

#### RETAIL PRICES AND PRICE INDEXES

Retail prices of food and groceries and average rentals of houses for years extending back to 1901 have been collected by the Commonwealth Statistician, and in some cases were recorded by the Statisticians of various States for earlier years.

Retail prices of a more extensive range of commodities (including clothing) and certain services in common demand have been ascertained at frequent and regular intervals since 1923, and comparable information was ascertained for the month of November in each year from 1914 to 1922. The range of items for which retail prices data are obtained was considerably expanded in 1948 and in later years. Average retail prices of certain food and grocery items in current periods are published in the annual *Labour Report*.

An explanation of the nature and purposes of retail price indexes is given in the various editions of the annual *Labour Report*, together with further particulars of indexes then current. Previous retail price indexes for Australia are briefly described below. The current retail price index, entitled the Consumer Price Index, was published for the first time in August 1960. It was compiled retrospectively to 1948–49. A description of the Consumer Price Index is given on pages 226–8.

#### Previous retail price indexes

Five series of retail price indexes had been compiled at various times for Australia by the Commonwealth Statistician prior to 1960. Each of these was continued until changed conditions required the compilation of indexes more directly relevant to current conditions. The respective indexes were as follows.

- (i) *The 'A' Series Index* (covering food, groceries and house rents) was first compiled in 1912 with the year 1911 as base = 1,000. It was discontinued in June 1938.
- (ii) *The 'B' Series Index* (covering food, groceries and rent of 4 and 5 roomed houses) was first compiled in 1925 and continued until December quarter 1953. It was the food and rent constituent of the 'C' Series Index and was designed to replace the 'A' Series Index for general statistical purposes.
- (iii) *The 'C' Series Index* (covering food and groceries, rent of 4 and 5 roomed houses, clothing, household drapery, household utensils, fuel, lighting, fares, smoking, and some other miscellaneous items) was first compiled in 1921. It was last issued on its original basis for December quarter 1960. For certain transitional purposes a 'C' Series Index was issued for some quarters after that. This was calculated by varying the index numbers of December quarter 1960 in proportion to movements shown by the Consumer Price Index.
- (iv) *The 'D' Series Index*, derived by combining the 'A' and 'C' Series Indexes, was used by the Commonwealth Court of Conciliation and Arbitration from May 1933 to May 1934 and then discontinued.

- (v) *The Interim Index* (covering food and groceries, rent of 4 and 5 roomed houses, clothing, household drapery, household utensils, fuel, lighting, fares, smoking, certain services and some miscellaneous items) was first compiled in 1954 with the year 1952-53 as base = 100. As its title indicated, it was constructed as a transitional index. Its compilation was discontinued following its replacement by the Consumer Price Index in June quarter 1960.

An index of retail price movements from 1901 to 1971 is shown on page 232 of this Year Book. It is derived by linking together successive indexes (the 'A' Series, the 'C' Series and the Consumer Price Index) available for that period.

In 1937 the Commonwealth Court of Conciliation and Arbitration introduced a 'Court' Index for the purpose of its system of making automatic quarterly adjustments to the basic wage within its jurisdiction. By decision of the Court the 'Court' Index ceased to be issued by the Industrial Registrar as at December quarter 1953. These 'Court' Index numbers were an arithmetical conversion of the 'C' Series Retail Price Index.

### Consumer Price Index

This retail price index was first compiled in 1960, retrospectively to September quarter 1948. A full description of the index is given in *Labour Report* No. 55, 1970.

#### Origin

The list of component items and the weighting pattern of the 'C' Series Retail Price Index, first adopted in 1921, were slightly revised by a Conference of Statisticians in 1936, but otherwise continued almost unchanged until the index was discontinued in 1960. The reasons for this and the circumstances which led to the present Consumer Price Index appear from ensuing paragraphs.

From the outbreak of war in 1939 to late in 1948, periodic policy changes in regard to various war-time controls (including rationing) caused recurrent changes in consumption and in the pattern of expenditure. This rendered changes desirable, but made it impracticable either to produce a new index, or to revise the old one, on any basis that would render the index more representative than it already was of the changing pattern of household expenditure in those years.

When commodity rationing had virtually ceased in the latter part of 1948, action was taken by the Statistician to collect price data of about 100 additional items and to gather information about current consumption and expenditure patterns. This was done to facilitate review of the component items and weighting system of the 'C' Series Retail Price Index in the light of the new pattern of wage-earner expenditure and consumption that appeared to be emerging. But there supervened, in the next few years, conditions which caused wide price dispersion coupled with a very rapid rise in prices and a new sequence of changes in consumption and in the pattern of wage-earner expenditure. Under these conditions it was not possible to devise any new weighting pattern likely to be more continuously representative of conditions then current than was the existing 'C' Series Retail Price Index on the 1936 revision.

A Conference of Statisticians considered the matter in June 1953, and resolved (in part) as follows:

- '(a) that, in view of the persistence of recurrent changes in the pattern of consumer expenditure in the post-war period it is undesirable to make a general revision of the list of items and weighting system of the 'C' Series Retail Price Index at present, unless industrial tribunals expressly desire some revision for special purposes;
- (b) that an Interim Retail Price Index be compiled with putative weights and components representative, as nearly as may be, of the post-war pattern of consumer usage and expenditure.'

The 'C' Series Index continued to be compiled on its pre-war basis without significant change in procedures. The Interim Retail Price Index was introduced in 1954 and continued until March quarter 1960.

The Interim Index was a transitional index designed to measure retail price variations on the 'C' Series model in terms of post-war consumption weights as emerging in the early 1950's. It embraced a wider range of commodities and services than did the 'C' Series Retail Price Index, but it did not take into account successive major changes in the pattern of expenditure and modes of living that began to occur early in 1950 and through to 1960. These changes could not in fact be detected and measured promptly and incorporated into an index concurrently with their happening. Nor was it envisaged as desirable to adopt fundamentally new procedures in price index construction until it was fully evident that far-reaching procedural changes were necessary to meet the situation that had developed between about 1950 and 1960.

In this period home-owning largely replaced house-renting, the use of the motor car greatly increased and partly replaced use of public transport, and various items of electrical household equipment and television came into widespread use. The impact of these (and other) changes in usage upon the pattern of household expenditure was heightened by disparate movements in prices. Together, they rendered nugatory the attempt to meet the situation by devising a single Interim Retail Price Index. As studies progressed and new data became available it was clear that no single list of items and no single set of fixed weights would be adequately representative as a basis for measuring retail price changes at all times throughout the post-war period. In consequence, the situation was met by compiling the Consumer Price Index constructed as a chain of linked indexes with significant changes in composition and weighting effected at short intervals.

#### **Purpose, scope and composition**

The Consumer Price Index is a quarterly measure of variations in retail prices for goods and services representing a high proportion of the expenditure of wage-earner households. The weighting pattern relates to estimated aggregates of wage-earner household expenditures and not to estimated expenditure of an 'average' or individual household of specified size, type, or mode of living. In this way it is possible to give appropriate representation to owner-occupied houses as well as rented houses and to include motor cars, television sets, and other major expenditures which relate to some households and not to others.

Consumer (retail) price indexes are sometimes loosely called 'cost of living indexes' and are thought to measure changes in the 'cost of living'. Neither the Consumer Price Index nor any other retail price index measures those changes in the cost of living that result directly from changes in the mode or level of living. Changes of that kind are matters for consideration apart from price indexes, but the change in prices of goods and services is a very important part of the change in the cost of living and this part is measured by consumer (retail) price indexes.

The Consumer Price Index covers a wide range of commodities and services arranged in the following five major groups:

- Food;
- Clothing and drapery;
- Housing;
- Household supplies and equipment;
- Miscellaneous.

These groups do not include every item of household spending. It is both impracticable and unnecessary for them to do so. Prices are collected regularly for specified quantities and qualities of a large and representative selection of commodities and services. Movements in the prices of these items, when combined in suitable proportions, provide a representative measure of price change as affecting a high proportion of the expenditure of wage-earner households.

Index numbers for sub-groups and special groupings have been compiled and published for the six State capital cities combined for each quarter from December quarter 1963. From December quarter 1968 onwards, information of contributions by index sub-groups to the total index in terms of All Groups Index Points has also been published. These details are shown in the tables on pages 31 to 33 of *Labour Report* No. 55, 1970.

Users of these figures should bear in mind that the Consumer Price Index is designed to measure the proportionate change in retail prices as combined in the five major groups and more particularly the total of the groups. For sub-groups or particular items, the index does not necessarily provide comprehensive and valid measures of price changes in those particular fields. Nor does it necessarily measure the relative influences of those classes of items in aggregate variations in prices. The Consumer Price Index is essentially a combination of selected items under various headings and not a dissection of total household expenditure into its component parts. Details of index numbers for sub-groups and special groupings are published to assist interpretation of movements shown by the Consumer Price Index and also to provide additional data of changes in retail prices.

#### **Structure—a chain of linked indexes**

Substantial changes have occurred in consumer usage and patterns of expenditure since the 1939-45 War. In order to keep the weighting pattern representative of current expenditures it has been necessary to construct indexes with additional items and changes in the weighting pattern at intervals, rather than on the basis of a list of items and set of weights that remained unchanged throughout the whole period covered. For the six State capital cities six series for short periods (namely, from the September quarter of 1948 to the June quarter of 1952, from the June quarter of 1952 to the June quarter of 1956, from the June quarter of 1956 to the March quarter of 1960, from



the March quarter of 1960 to the December quarter of 1963, from the December quarter of 1963 to the December quarter of 1968, and from the December quarter of 1968 onwards) have therefore been constructed and linked to form a continuous retail price index series known as the Consumer Price Index. (For information regarding these links for Canberra *see Labour Report* No. 55, 1970.)

During each period between links the items and weighting remained unchanged. At times of linking the weighting pattern was altered, and new items (mainly ones that had become significant in household expenditure) were introduced. Under this method, in effect, average percentage price movements are assessed on one pattern up to the time of the link and on another pattern thereafter. The process of linking ensures that the series reflects only price variations and not differences in cost of the old and new lists of items. The introduction of new items and weights by linking does not, of itself, raise or lower the level of the index.

### **Tabular statements of retail price index numbers**

#### **Consumer Price Index**

The index has been compiled for each quarter from September quarter 1948 and for each year from 1948-49. 'All Groups' index numbers and 'Group' index numbers for each of the five major groups are compiled and published regularly for the six State capital cities combined and separately and for Canberra. Index numbers for sub-groups and special groupings of the Consumer Price Index for the six State capital cities combined have been compiled and published for each quarter from December quarter 1963 and for each year from 1966-67. The reference base for these indexes is: Year 1966-67 = 100.0.

Index numbers for each quarter are first issued in mimeographed statistical bulletins available from the Commonwealth Statistician about three weeks after the end of the quarter. These bulletins contain comment on the index and on significant price movements in that quarter. Tables showing index numbers for preceding quarters and years are presented.

The tables on the following pages show Consumer Price Index Numbers (Total All Groups) for the six State capital cities combined and separately and for Canberra for periods from the year 1954-55 (*see* page 229), Consumer Price Index Group Index Numbers for the six State capital cities combined for periods from the year 1954-55 (*see* page 230), and Consumer Price Index Group Index Numbers for each State capital city and for Canberra for recent years and quarters (*see* page 231).

**CONSUMER PRICE INDEX: ALL GROUPS INDEX NUMBERS  
SIX STATE CAPITAL CITIES AND CANBERRA, YEARS 1954-55 TO 1970-71  
AND QUARTERS MARCH 1967 TO DECEMBER 1971**

*(Base of each index: Year 1966-67 = 100.0) (a)*

The separate city indexes measure price movements within each city individually. They do not compare price levels as between cities.

State capital cities—combined and separately									
Period	Six State capital cities(b)	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Canberra	
Year—									
1954-55 . . .	74.0	75.0	72.5	71.4	75.6	76.3	74.3	77.5	
1955-56 . . .	77.0	77.5	76.8	73.8	78.1	78.3	78.1	80.2	
1956-57 . . .	81.5	82.8	81.0	77.8	81.2	81.8	82.8	84.3	
1957-58 . . .	82.3	84.0	81.3	79.4	81.8	82.4	82.9	84.8	
1958-59 . . .	83.6	84.6	82.9	82.1	83.6	83.2	84.1	85.8	
1959-60 . . .	85.7	86.5	85.3	84.2	86.2	84.8	85.6	87.6	
1960-61 . . .	89.2	89.6	89.5	87.1	89.8	87.9	90.3	90.3	
1961-62 . . .	89.6	89.9	89.8	88.4	89.5	88.2	90.7	91.6	
1962-63 . . .	89.8	90.4	89.7	88.7	89.1	88.7	90.7	91.8	
1963-64 . . .	90.6	91.4	90.4	89.6	90.2	89.8	91.7	92.5	
1964-65 . . .	94.0	94.5	94.0	93.0	93.9	92.6	94.6	95.3	
1965-66 . . .	97.4	97.7	97.5	97.5	97.0	96.1	98.0	98.1	
1966-67 . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
1967-68 . . .	103.3	103.2	103.7	103.3	102.9	102.9	104.6	102.6	
1968-69 . . .	106.0	106.2	106.2	105.5	105.3	105.5	106.1	104.4	
1969-70 . . .	109.4	110.6	108.7	108.4	108.2	109.4	108.5	107.4	
1970-71 . . .	114.6	116.8	113.1	114.2	112.5	114.1	112.6	113.0	
Quarter—									
1967—March . .	100.1	100.1	100.0	100.3	100.2	100.3	100.6	100.1	
June . . .	101.3	101.1	101.6	101.0	101.5	101.6	101.5	101.3	
September . .	102.7	102.5	102.9	102.8	102.6	102.0	104.3	102.2	
December . .	103.0	102.9	103.3	103.0	102.1	102.5	105.0	102.4	
1968—March . .	103.4	103.2	103.8	103.7	102.6	103.1	104.6	102.6	
June . . .	104.2	104.0	104.8	103.7	104.2	104.0	104.6	103.2	
September . .	104.6	104.4	105.1	104.7	104.2	104.3	105.0	103.5	
December . .	105.7	105.9	106.0	105.3	105.2	104.9	105.8	103.9	
1969—March . .	106.4	106.7	106.6	105.8	105.5	105.6	106.5	104.8	
June . . .	107.2	107.6	107.2	106.3	106.4	107.0	107.0	105.2	
September . .	107.8	108.4	107.6	107.2	106.9	107.7	107.4	106.0	
December . .	108.7	109.6	108.3	107.9	107.3	108.7	108.1	106.7	
1970—March . .	109.8	111.3	108.9	108.9	108.4	109.9	108.9	108.0	
June . . .	111.2	112.9	110.1	109.7	110.0	111.4	109.6	109.0	
September . .	111.9	113.9	110.7	111.1	109.9	111.6	110.2	109.7	
December . .	114.0	116.2	112.6	113.3	111.8	113.5	112.4	113.2	
1971—March . .	115.2	117.4	113.7	115.1	112.9	114.8	113.2	113.6	
June . . .	117.2	119.8	115.2	117.2	115.4	116.4	114.6	115.6	
September . .	119.2	122.9	116.5	119.0	116.5	117.2	115.9	116.8	
December . .	122.0	125.6	119.7	121.3	119.1	120.5	119.7	119.0	

(a) Figures appearing after the decimal point possess little significance for general statistical purposes. They are inserted to avoid distortions that would occur in rounding off the figures to the nearest whole number. (b) Weighted average.

**CONSUMER PRICE INDEX: GROUP INDEX NUMBERS**  
**WEIGHTED AVERAGE OF SIX STATE CAPITAL CITIES, YEARS 1954-55 TO 1970-71**  
**AND QUARTERS MARCH 1967 TO DECEMBER 1971**

*(Base of each index: Year 1966-67 = 100.0) (a)*

<i>Period</i>	<i>Food</i>	<i>Clothing and drapery</i>	<i>Housing</i>	<i>Household supplies and equipment</i>	<i>Miscel- laneous</i>	<i>All groups</i>
<b>Year—</b>						
1954-55 . . . .	73.7	84.5	60.5	88.1	67.1	74.0
1955-56 . . . .	77.8	85.4	64.2	88.3	71.1	77.0
1956-57 . . . .	81.5	86.9	68.1	92.0	79.3	81.5
1957-58 . . . .	80.1	89.5	71.0	93.4	80.4	82.3
1958-59 . . . .	81.6	90.5	72.9	94.4	81.4	83.6
1959-60 . . . .	84.7	91.5	75.4	95.4	83.2	85.7
1960-61 . . . .	90.2	93.4	80.8	96.6	85.5	89.2
1961-62 . . . .	88.6	94.4	84.0	97.9	86.1	89.6
1962-63 . . . .	87.8	94.7	86.5	97.7	86.6	89.8
1963-64 . . . .	89.0	95.3	89.1	96.4	87.3	90.6
1964-65 . . . .	93.9	96.8	92.0	97.2	91.4	94.0
1965-66 . . . .	98.4	97.9	95.9	98.9	95.8	97.4
1966-67 . . . .	100.0	100.0	100.0	100.0	100.0	100.0
1967-68 . . . .	104.7	102.2	104.5	101.2	102.8	103.3
1968-69 . . . .	105.8	104.3	109.1	102.9	107.5	106.0
1969-70 . . . .	108.1	107.5	115.5	104.1	111.6	109.4
1970-71 . . . .	112.4	111.9	123.5	107.4	117.8	114.6
<b>Quarter—</b>						
1967—March . . .	100.0	100.2	100.1	99.9	100.3	100.1
June . . . .	101.9	101.1	101.8	100.4	101.0	101.3
September . . .	104.8	101.4	102.9	100.6	101.8	102.7
December . . . .	103.9	102.1	104.2	101.1	102.8	103.0
1968—March . . .	104.6	102.3	104.7	101.1	103.1	103.4
June . . . .	105.6	102.8	106.0	101.9	103.6	104.2
September . . .	105.3	103.3	106.7	102.1	105.1	104.6
December . . . .	105.5	104.1	108.7	102.7	107.3	105.7
1969—March . . .	105.7	104.4	109.7	103.0	108.5	106.4
June . . . .	106.6	105.2	111.2	103.7	108.9	107.2
September . . .	106.6	106.0	112.8	103.7	110.0	107.8
December . . . .	107.1	107.2	114.7	103.9	110.9	108.7
1970—March . . .	108.7	107.9	116.2	104.0	112.0	109.8
June . . . .	110.1	108.9	118.3	104.7	113.5	111.2
September . . .	110.9	109.2	120.2	105.4	113.7	111.9
December . . . .	112.0	110.9	122.7	106.6	117.5	114.0
1971—March . . .	112.3	112.2	124.4	107.8	119.4	115.2
June . . . .	114.3	115.1	126.8	109.8	120.7	117.2
September . . .	115.6	115.7	128.8	110.0	125.1	119.2
December . . . .	116.7	118.0	132.4	111.3	130.6	122.0

(a) Figures appearing after the decimal point possess little significance for general statistical purposes. They are inserted to avoid distortions that would occur in rounding off the figures to the nearest whole number.



**CONSUMER PRICE INDEX: GROUP INDEX NUMBERS**  
**SIX STATE CAPITAL CITIES AND CANBERRA, YEARS 1948-49 TO 1970-71**  
**AND QUARTERS MARCH TO DECEMBER 1971**

(Base of each index: Year 1966-67 = 100.0) (a)

The index numbers hereunder are designed to measure movements in retail prices of specified groups of items for specified cities individually. They measure variations from time to time and not differences in price level as between cities.

City	Year						1971			
	1948-49	1966-67	1967-68	1968-69	1969-70	1970-71	March quarter	June quarter	Sept. quarter	Dec. quarter
<b>FOOD GROUP</b>										
Six State Capitals(b)	38.2	100.0	104.7	105.8	108.1	112.4	112.3	114.3	115.6	116.7
Sydney . . .	37.9	100.0	103.9	104.9	107.8	112.8	113.0	115.1	116.5	117.7
Melbourne . .	38.9	100.0	106.3	107.3	109.1	112.7	112.1	113.7	115.2	116.6
Brisbane . . .	36.8	100.0	103.7	104.7	107.7	113.5	113.9	116.8	118.1	118.3
Adelaide . . .	38.6	100.0	104.7	106.4	107.1	109.5	109.4	111.5	112.7	113.2
Perth . . . .	38.4	100.0	102.9	104.5	108.1	112.5	112.7	114.9	114.6	115.5
Hobart . . . .	39.1	100.0	106.8	105.3	106.4	109.6	109.5	110.2	111.3	113.0
Canberra . . .	37.6	100.0	104.3	105.1	107.0	110.7	110.1	112.4	114.4	114.8
<b>CLOTHING AND DRAPERY GROUP</b>										
Six State Capitals(b)	48.9	100.0	102.2	104.3	107.5	111.9	112.2	115.1	115.7	118.0
Sydney . . . .	49.0	100.0	102.2	104.2	107.5	112.0	112.4	115.3	116.0	118.2
Melbourne . .	48.6	100.0	102.1	104.2	107.4	111.5	111.8	114.6	115.1	117.4
Brisbane . . .	47.8	100.0	102.4	104.3	107.3	111.7	112.1	114.7	115.1	117.7
Adelaide . . .	49.4	100.0	102.2	104.5	108.1	112.6	112.8	115.8	116.4	119.2
Perth . . . .	50.6	100.0	102.1	104.5	107.8	112.3	112.7	115.7	116.4	118.3
Hobart . . . .	48.2	100.0	102.4	104.5	107.9	111.9	112.0	115.0	115.9	118.2
Canberra . . .	49.5	100.0	102.3	104.2	107.5	111.7	111.8	114.9	115.2	117.7
<b>HOUSING GROUP</b>										
Six State Capitals(b)	40.5	100.0	104.5	109.1	115.5	123.5	124.4	126.8	128.8	132.4
Sydney . . . .	41.1	100.0	105.0	110.5	119.9	131.6	132.4	135.6	138.0	142.3
Melbourne . .	41.3	100.0	103.8	107.9	112.2	117.8	118.7	120.6	121.8	124.4
Brisbane . . .	41.3	100.0	105.8	109.6	113.4	118.3	118.9	121.4	125.8	128.0
Adelaide . . .	38.4	100.0	102.1	104.7	109.3	115.9	117.2	118.5	120.0	123.9
Perth . . . .	36.1	100.0	105.8	112.7	120.1	125.7	126.9	127.6	128.4	134.4
Hobart . . . .	36.8	100.0	103.6	108.4	112.6	117.4	118.2	119.2	120.4	124.1
Canberra . . .	41.8	100.0	100.4	101.9	104.6	116.3	119.4	120.0	118.8	122.1
<b>HOUSEHOLD SUPPLIES AND EQUIPMENT GROUP</b>										
Six State Capitals(b)	58.3	100.0	101.2	102.9	104.1	107.4	107.8	109.8	110.0	111.3
Sydney . . . .	59.7	100.0	101.2	103.0	104.8	109.3	109.6	112.4	112.9	113.8
Melbourne . .	55.0	100.0	101.4	102.9	103.5	105.8	106.1	107.4	107.2	108.9
Brisbane . . .	58.9	100.0	101.2	104.3	105.5	108.5	109.2	110.6	111.0	112.4
Adelaide . . .	64.9	100.0	100.3	101.1	102.0	105.4	105.6	108.1	108.1	109.2
Perth . . . .	60.4	100.0	100.7	102.1	103.7	107.7	108.4	109.7	109.9	111.4
Hobart . . . .	53.4	100.0	102.9	104.5	106.1	109.2	109.1	111.6	112.4	117.4
Canberra . . .	61.4	100.0	100.4	100.6	101.9	104.7	104.5	106.0	106.4	107.6
<b>MISCELLANEOUS GROUP</b>										
Six State Capitals(b)	44.7	100.0	102.8	107.5	111.6	117.8	119.4	120.7	125.1	130.6
Sydney . . . .	46.5	100.0	103.0	108.5	113.7	120.3	121.4	123.1	131.1	135.6
Melbourne . .	42.2	100.0	102.5	107.3	110.2	115.8	118.0	118.7	121.1	127.7
Brisbane . . .	44.4	100.0	103.2	106.0	109.2	117.3	119.5	120.3	122.9	127.8
Adelaide . . .	47.1	100.0	102.6	107.0	112.0	118.1	118.9	121.9	123.6	128.6
Perth . . . .	45.4	100.0	103.2	105.6	109.8	114.8	116.1	116.9	119.0	125.4
Hobart . . . .	43.5	100.0	104.5	108.0	111.0	116.6	118.3	119.4	121.6	128.2
Canberra . . .	50.2	100.0	103.0	107.0	112.4	119.3	120.7	122.5	125.2	129.0

(a) Figures appearing after the decimal point possess little significance for general statistical purposes. They are inserted to avoid distortions that would occur in rounding off the figures to the nearest whole number. (b) Weighted average.

### Retail Price Index Numbers, 1901 to 1971

The index numbers shown below are presented as a continuous series, but they give only a broad indication of long-term trends in retail price levels. They are derived by linking a number of indexes that differ greatly in scope. The successive indexes used are; from 1901 to 1914, the 'A' Series Retail Price Index: from 1914 to 1946-47, the 'C' Series Retail Price Index: from 1946-47 to 1948-49, a composite of Consumer Price Index Housing Group (partly estimated) and 'C' Series Index excluding Rent: and from 1948-49 onwards, the Consumer Price Index.

#### RETAIL PRICE INDEX NUMBERS: SIX STATE CAPITAL CITIES COMBINED, 1901 TO 1971

(Base: Year 1911 = 100)

Year	Index number	Year	Index number	Year	Index number
1901	88	1925	165	1949	240
1902	93	1926	168	1950	262
1903	91	1927	166	1951	313
1904	86	1928	167	1952	367
1905	90	1929	171	1953	383
1906	90	1930	162	1954	386
1907	90	1931	145	1955	394
1908	95	1932	138	1956	419
1909	95	1933	133	1957	429
1910	97	1934	136	1958	435
1911	100	1935	138	1959	443
1912	110	1936	141	1960	459
1913	110	1937	145	1961	471
1914(a)	114	1938	149	1962	469
1915(a)	130	1939	153	1963	472
1916(a)	132	1940	159	1964	483
1917(a)	141	1941	167	1965	502
1918(a)	150	1942	181	1966	517
1919(a)	170	1943	188	1967	534
1920(a)	193	1944	187	1968	548
1921(a)	168	1945	187	1969	564
1922(a)	162	1946	190	1970	586
1923	166	1947	198	1971	621
1924	164	1948	218		

(a) November.

### International comparisons

The following table shows index numbers of consumer (retail) prices for various countries. Except where otherwise noted, the year 1963 is taken as base (= 100). The index numbers show fluctuations in prices in each country, and do not measure relative price levels as between countries.

# INDEX NUMBERS OF CONSUMER (RETAIL) PRICES IN VARIOUS COUNTRIES ALL GROUPS INDEXES, 1963 TO 1971

(Source: *Monthly Bulletin of Statistics* of the Statistical Office of the United Nations)  
(Base of each index: year 1963 = 100)

Period	Australia (a)	Belgium (b)	Brazil (Sao Paulo)	Canada	France	Federal Republic of Germany	India (c)	Indonesia (Dja- karta)	Italy	Japan	Nether- lands (d)
1963 .	100	100	100	100	100	100	100	100	100	100	100
1964 .	102	104	187	102	103	102	113	205	106	104	106
1965 .	106	108	302	104	106	106	124	830	111	111	111
1966 .	110	-113-	443	108	109	110	137	9,502	-113-	116	117
1967 .	113	116	574	112	112	111	156	25,612	118	121	-121-
1968 .	-116-	119	714	117	117	113	160	57,712	119	128	126
1969 .	120	124	879	122	124	116	175	61,250	122	134	135
1970 .	124	129	1,047	126	-131-	121	184	68,807	128	-144-	141
1971 .	132	134	1,268	130	138	127	190	71,740	-134-	153	152
Quarter— 1971—											
March	128	132	1,177	127	135	124	184	73,724	132	150	147
June .	130	133	1,246	129	137	126	185	71,853	134	153	151
Sept.	133	135	1,302	131	139	127	193	69,866	135	154	153
Dec.	136	137	1,346	132	141	129	196	71,702	137	156	156

Period	New Zealand	Norway	Pakistan (Karachi) (e)	Philip- pines (Manila)	Singap- ore(f)	Republic of South Africa(g)	Sweden	Switzer- land	United Kingdom	United States of America	West Malay- sia(f)
1963 .	100	100	100	100	100	100	100	100	100	100	100
1964 .	104	106	104	108	102	103	103	103	103	-101-	100
1965 .	-107-	110	110	109	102	106	109	107	108	103	100
1966 .	110	114	118	114	104	110	116	-112-	113	106	101
1967 .	117	119	126	122	107	114	121	116	115	109	105
1968 .	122	123	126	122	108	116	123	119	121	114	105
1969 .	128	127	130	126	108	119	126	122	127	120	104
1970 .	136	140	137	133	108	-125-	135	126	135	127	106
1971 .	150	149	144	156	110	133	145	135	148	132	107
Quarter— 1971—											
March	145	146	140	143	111	129	143	132	143	130	108
June .	149	148	142	149	109	132	143	134	148	132	106
Sept.	152	150	145	161	110	135	145	135	150	133	106
Dec.	155	152	147	169	111	136	148	138	152	134	108

(a) Consumer Price Index converted to base: 1963 = 100. (b) Rent is not included. (c) Beginning March quarter 1969, new index; base: 1960 = 100. (d) Excluding compulsory social insurance and wage tax. (e) Industrial workers. (f) All races. (g) White population.

NOTE. Symbol — on each side of an index number (e.g. -95-) indicates that two series have been linked during that period. Symbol — between two index numbers indicates that it is not possible to link two series (because of change in scope, etc.) and therefore the index numbers are not comparable with each other even though they may be shown on the same base period.

## WHOLESALE PRICES AND PRICE INDEXES

Two indexes of wholesale prices of basic materials have been compiled by the Commonwealth Bureau of Census and Statistics. These are;

(i) the Melbourne Wholesale Price Index;

(ii) the Wholesale Price (Basic Materials and Foodstuffs) Index.

New series of wholesale price index numbers relating to materials used and articles produced by defined areas of the economy are being developed. Two such indexes have already been published. They are the Price Index of Materials used in Building other than House Building (issued April 1969) and the Price Index of Materials used in House Building (issued November 1970). Work continues on the preparation of further measures.

A special purpose index 'Wholesale Price Index of Electrical Installation Materials' is also published by the Bureau (see page 239).

## Melbourne Wholesale Price Index

An index of Melbourne wholesale prices was first compiled in 1912. It related chiefly to basic material and foods weighted in accordance with consumption in the years immediately preceding that year. Neither the list of items nor the weighting was varied, except for some changes in the building materials group in 1949. The series has some historical significance as a measure of changes, since the year 1861, in the prices of its component items combined in the proportions in which they were in common use about the year 1910. A description of the index and a list of the commodities included in it were published in *Labour Report* No. 38, 1949, pages 43-5. Index numbers up to the year 1961, the last period for which the index was compiled, were published in *Year Book* No. 48, 1962.



### Wholesale Price (Basic Materials and Foodstuffs) Index

General publication of this index was discontinued with the issue of index numbers for the month of December 1970. Index numbers up to that period may be found in the mimeographed bulletin *Wholesale Price (Basic Materials and Foodstuffs) Index* (9.4) or in the printed publications *Monthly Review of Business Statistics* and *Quarterly Summary of Australian Statistics*.

The index related to commodities priced in their primary or basic form wherever possible and as nearly as might have been at the point where they first made effective impact on the local price structure. With a few exceptions, prices were from Melbourne sources. The weights were based on estimates of the average annual consumption of the commodities in Australia during the period 1928–29 to 1934–35 inclusive.

A list of the commodities and other information concerning the Wholesale Price (Basic Materials and Foodstuffs) Index is given in *Labour Report No. 53*, 1967, pages 38–41.

### Wholesale Price Index of Materials used in Building other than House Building

#### General

This index was introduced in April 1969 and relates to the construction of buildings other than houses. Further information concerning the method of compiling the index, as well as more detailed group index numbers for each capital city, will be found in the publication *Price Index of Materials used in Building other than House Building* (9.6) of 23 April 1969 and subsequent issues, as well as in the *Labour Report No. 55*, 1970.

#### Scope and composition

The index measures changes in prices of selected materials used in the construction of buildings other than houses and 'low-rise' flats (in general, those up to three storeys). Its composition is in accordance with the materials usage in actual building projects which were selected as representative for the purpose.

The index includes 72 items, combined in eleven groups, in addition to an 'All groups' index. Some items carry the weights of similar items not directly priced. Items are described in terms of fixed specifications with the aim of recording price changes for representative materials of constant quality.

Although the selected materials (or many of them) are also used in house (and low-rise flat) building, in building repair, maintenance and alteration work, and in 'engineering construction' work (e.g. projects such as roads, dams, bridges and the like), the weighting pattern of the index, being designed for the specific purpose mentioned in the first paragraph of this section, is not applicable to these other activities of the Construction industry. In addition, since the weights are based on an average materials usage over a range of building 'use-types' (e.g. office building, factory, etc.), the index is not necessarily applicable to any specific building or any particular type of building.

#### Base period and method of calculation

The reference base of the index is the year 1966–67 = 100.0. The weighting base corresponds broadly with the reference base, but does not exactly coincide because of the nature of the data from which the weights were derived.

The index is a fixed-weights index and is calculated by the method known as 'the weighted arithmetic mean of price relatives'.

#### Derivation of items and weights

The items and weights used in the index were derived from reported values of each material used in selected representative buildings constructed in or about 1966–67. The selection took account of building use-type and construction characteristics (e.g. type of frame, wall, floor, etc.) within use-types. Information of the former was obtained from building statistics, and of the latter from an *ad hoc* survey of approximately 800 buildings.

#### The weights

The weighting pattern used in the index is given in Year Book No. 55, pages 1259–60. This single weighting pattern, relating to the whole of Australia, is applied (with minor exceptions) to local price measures in calculating indexes for each State capital city.

The index for the six State capital cities combined is a weighted average of individual city indexes. The relative weighting of the capitals is in proportion to the estimated value on completion of building other than house building in the separate States during the three years ended June 1967.

# Prices

Prices are collected as at the mid-point of the month to which the index refers, or as near thereto as practicable. They relate to specified standards of each commodity and are obtained in all State capital cities from representative suppliers of materials used in building. In general the point of pricing is 'delivered on site' but in some cases it has been necessary to use the nearest realistic price available, e.g. that for 'supplied and fixed'. Local prices are used in the indexes for each capital city, with the main exception that, for the whole of the group Electrical installation materials and the majority of the items in the group Mechanical services components, Sydney and Melbourne price series are used.

## Index numbers

The index has been compiled for each month from July 1966, and for the financial years from 1966-67. Index numbers for the individual groups and all groups for the weighted average of the six State capital cities, and for all groups combined for each State capital city, are given in the following tables. Figures are published to one decimal place to avoid distortions that would occur in rounding off the index numbers to the nearest whole number.

The separate city indexes measure price movements in each State capital city individually. They enable comparisons to be drawn between capitals as to differences in degree of price movement from period to period, but not as to differences in price level.

## WHOLESALE PRICE INDEX OF MATERIALS USED IN BUILDING OTHER THAN HOUSE BUILDING

### GROUP INDEX NUMBERS—WEIGHTED AVERAGE OF SIX STATE CAPITAL CITIES YEARS 1966-67 TO 1970-71 AND MONTHS JULY TO DECEMBER 1971

(Base of each Index: Year 1966-67 = 100.0)(a)

Period	Concrete mix, cement, sand, etc.	Cement products	Bricks, stone, etc.	Timber, board and joinery	Steel and iron products	Aluminium products
1966-67 . . .	100.0	100.0	100.0	100.0	100.0	100.0
1967-68 . . .	101.5	102.2	103.7	103.0	102.3	101.4
1968-69 . . .	103.5	106.8	108.2	107.2	106.1	103.9
1969-70 . . .	106.9	111.7	112.6	111.2	110.1	107.4
1970-71 . . .	113.0	118.0	118.6	117.0	115.8	113.0
1971-72—						
July . . .	118.0	121.5	121.5	121.5	123.2	116.5
August . . .	118.6	121.5	121.9	122.0	124.4	116.9
September . . .	118.6	123.1	122.8	122.1	125.0	117.6
October . . .	118.7	123.4	122.9	122.3	124.7	118.9
November . . .	119.6	125.7	123.7	122.7	124.7	119.4
December . . .	119.6	125.8	125.0	122.9	124.5	119.9

Period	Other metal products	Plumbing fixtures	Miscellaneous materials	Electrical installation materials	Mechanical services components	All groups
1966-67 . . .	100.0	100.0	100.0	100.0	100.0	100.0
1967-68 . . .	105.9	102.8	102.3	100.9	101.4	102.2
1968-69 . . .	106.8	103.3	103.2	102.1	107.7	105.6
1969-70 . . .	126.3	113.7	105.8	112.2	111.8	110.5
1970-71 . . .	121.4	121.3	110.3	110.9	119.0	115.5
1971-72—						
July . . .	118.9	125.3	114.4	112.0	122.8	120.2
August . . .	120.4	125.8	115.0	113.2	125.7	121.3
September . . .	121.3	127.4	115.6	114.2	126.6	121.9
October . . .	120.8	128.4	116.5	114.3	127.4	122.1
November . . .	120.8	136.2	117.2	114.3	128.0	122.6
December . . .	120.7	136.4	117.1	114.2	128.1	122.7

(a) Figures are shown to one decimal place to avoid distortions that would occur in rounding off the index numbers to the nearest whole number.

# WHOLESALE PRICE INDEX OF MATERIALS USED IN BUILDING OTHER THAN HOUSE BUILDING

## ALL GROUPS INDEX NUMBERS—SIX STATE CAPITAL CITIES YEARS 1966-67 TO 1970-71 AND MONTHS JULY TO DECEMBER 1971

(Base of each Index: Year 1966-67 = 100.0) (a)

NOTE. The separate city indexes measure price movements within each city individually. They do not compare price levels as between cities.

Period	State capital cities						Weighted average of six State capital cities
	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	
1966-67	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1967-68	102.6	101.7	102.2	101.8	102.0	102.3	102.2
1968-69	106.5	105.0	105.1	105.0	104.7	105.1	105.6
1969-70	111.7	109.8	110.3	109.4	108.9	109.7	110.5
1970-71	116.4	115.1	116.4	113.9	113.3	115.0	115.5
1971-72—							
July	120.5	120.7	120.3	119.0	118.1	119.0	120.2
August	121.4	121.8	121.6	120.5	119.1	120.7	121.3
September	122.1	122.3	122.5	121.0	119.9	121.1	121.9
October	122.0	122.8	122.9	121.4	120.3	121.5	122.1
November	122.4	123.1	123.5	122.6	121.0	121.9	122.6
December	122.5	123.1	123.6	122.6	121.1	122.0	122.7

(a) Figures are shown to one decimal place to avoid distortions that would occur in rounding off the index numbers to the nearest whole number.

## Wholesale Price Index of Materials used in House Building

### General

This index, referring to materials used in house building, was introduced in November 1970 and is complementary to the Price Index of Materials used in Building other than House Building. Further information concerning the method of compiling the Index, as well as more detailed group index numbers and the separate weighting patterns for the six State capital cities, will be found in the publication *Price Index of Materials used in Housing Building* (9.9) of 27 November 1970. This and subsequent issues are available on request. A full description of the index is also given in *Labour Report* No. 55, 1970.

### Scope and composition

The index measures changes in prices of selected materials used in the construction of houses. Its composition is in accordance with the usage of materials in actual houses which were selected as representative for the purpose. The index does not purport to represent buildings of any kind other than houses. The house building construction types included are those which use brick, brick veneer, timber or asbestos cement sheeting as the principal material for the outer walls.

The numbers of items included in the lists for the respective State capital cities vary between 49 and 51. In all cases the selection of materials was based on local usage. Items are combined in eleven groups in addition to the 'All groups' index. Some items carry the weight of similar items not directly priced. They are described in terms of fixed specifications with the aim of recording price changes for representative materials of constant quality.

### Base period and method of calculation

In the interests of uniformity and ease of use, the reference base of the index is the year 1966-67 = 100.0, the same as that used for the Price Index of Materials used in Building other than House Building. However, because of the later time at which the weighting source data were collected, the weighting base approximates more closely to the year 1968-69.

The index is a fixed weights index and is calculated by the method known as 'the weighted arithmetic mean of price relatives'.



### Derivation of items and weights

The items and weights used in the index were derived from reported values of each material used in selected representative houses constructed in or about 1968-69 in each State capital city. The selection took account, within the four major construction types, of a range of characteristics of these houses—e.g. internal partitions, windows, roofing, etc., as well as whether such things as paths and fences were included in the job. Information of this nature was obtained from an *ad hoc* survey of some 250 house builders from whom data regarding approximately 900 houses representative of their operations were obtained. The survey was conducted in all State capital cities.

### The weights

The group and item weights used in the index for each State capital city are given in the publications referred to in the paragraph under **General** above. The pattern resulting from their aggregation over the six State capitals is given in *Year Book* No. 56, 1970, pages 236-7 as well as in those publications referred to above.

Each State capital city has a unique weighting pattern which reflects the difference in the estimated relative importance of given items as between cities. The weighting pattern for each capital city is applied to local price measures in calculating indexes for that city.

### Prices

Price series used relate to specified standards of each commodity with the aim of incorporating in the index price changes for representative materials of constant quality. In general the point of pricing is 'delivered on site', but in some cases it has been necessary to use the nearest realistic price available, e.g. that for 'supplied and fixed'. The price series are obtained in all State capital cities from representative suppliers of materials used in house building. In the main they are collected as at the mid-point of the month to which the index refers, or as near thereto as practicable.

### Index numbers

The index has been compiled for each month from July 1966, and for the financial years from 1966-67. Index numbers for the individual groups and all groups for the six State capital cities combined and for all groups combined for each State capital city, are given in the following tables. Figures are published to one decimal place to avoid distortions that would occur in rounding off the index numbers to the nearest whole number.

The separate city indexes measure price movements in each State capital city individually. They enable comparisons to be drawn between capitals as to differences in degree of price movement from period to period, but not as to differences in price level.

**WHOLESALE PRICE INDEX OF MATERIALS USED IN HOUSE BUILDING**  
**GROUP INDEX NUMBERS—WEIGHTED AVERAGE OF SIX STATE CAPITAL CITIES**  
**YEARS 1966-67 TO 1970-71 AND MONTHS JULY TO DECEMBER 1971**

*(Base of each Index: Year 1966-67 = 100.0) (a)*

<i>Period</i>	<i>Concrete mix, cement and sand</i>	<i>Cement products</i>	<i>Clay bricks, tiles, etc.</i>	<i>Timber, board and joinery</i>	<i>Steel products</i>	<i>Other metal products</i>
1966-67 . . .	100.0	100.0	100.0	100.0	100.0	100.0
1967-68 . . .	101.6	102.8	103.6	103.0	101.9	103.9
1968-69 . . .	103.8	107.0	107.8	108.6	104.8	106.3
1969-70 . . .	107.1	112.6	112.4	113.5	110.0	111.8
1970-71 . . .	113.4	121.8	118.0	118.5	115.0	112.4
1971-72—						
July . . .	118.1	127.7	121.4	123.5	123.2	115.2
August . . .	118.7	127.4	121.4	123.7	124.3	116.3
September . . .	118.8	128.3	122.0	123.8	125.9	118.3
October . . .	119.1	128.6	122.8	123.8	126.1	118.0
November . . .	119.8	129.3	124.2	123.7	126.2	118.8
December . . .	119.9	132.1	125.6	123.8	126.1	119.0

<i>Period</i>	<i>Plumbing fixtures</i>	<i>Electrical instal- lation materials</i>	<i>Installed appli- ances</i>	<i>Plaster and plaster products</i>	<i>Miscel- laneous materials</i>	<i>All groups</i>
1966-67 . . .	100.0	100.0	100.0	100.0	100.0	100.0
1967-68 . . .	101.7	103.3	100.0	101.7	102.9	102.7
1968-69 . . .	102.0	105.2	99.7	103.0	104.5	106.3
1969-70 . . .	108.7	115.8	102.2	105.1	107.4	110.9
1970-71 . . .	113.6	115.0	103.8	109.4	111.0	115.7
1971-72—						
July . . .	116.0	115.6	105.1	113.3	113.0	119.9
August . . .	116.3	117.8	106.0	113.3	113.9	120.3
September . . .	118.5	117.8	107.3	113.5	115.1	121.0
October . . .	118.5	120.5	107.4	117.2	115.8	121.4
November . . .	123.3	120.5	107.7	117.9	117.1	122.0
December . . .	123.7	120.5	107.5	117.9	116.9	122.5

*(a) Figures are shown to one decimal place to avoid distortions that would occur in rounding off the index numbers to the nearest whole number.*

**WHOLESALE PRICE INDEX OF MATERIALS USED IN HOUSE BUILDING  
ALL GROUPS INDEX NUMBERS—SIX STATE CAPITAL CITIES, YEARS 1966-67 TO 1970-71  
AND MONTHS JULY TO DECEMBER 1971**

*(Base of each Index: Year 1966-67 = 100.0) (a)*

NOTE. The separate city indexes measure price movements within each city individually. They do not compare price levels as between cities.

<i>Period</i>	<i>State capital cities</i>						<i>Weighted average of six State capital cities</i>
	<i>Sydney</i>	<i>Melbourne</i>	<i>Brisbane</i>	<i>Adelaide</i>	<i>Perth</i>	<i>Hobart</i>	
1966-67 . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1967-68 . .	103.4	101.3	103.4	102.1	104.0	101.8	102.7
1968-69 . .	109.3	103.6	105.6	107.0	105.9	104.1	106.3
1969-70 . .	115.2	107.2	109.4	112.4	110.3	107.7	110.9
1970-71 . .	119.8	112.3	115.2	116.7	113.9	114.3	115.7
1971-72—							
July . .	123.4	116.7	120.1	121.2	118.2	118.3	119.9
August . .	124.1	116.8	120.4	121.8	118.6	118.5	120.3
September . .	124.8	117.3	121.3	122.5	119.5	118.9	121.0
October . .	125.3	117.8	122.0	122.9	119.5	119.4	121.4
November . .	125.6	118.0	123.4	124.3	120.9	119.9	122.0
December . .	126.2	118.6	123.4	124.7	121.0	120.0	122.5

(a) Figures are shown to one decimal place to avoid distortions that would occur in rounding off index numbers to the nearest whole number.

### Wholesale Price Index of Electrical Installation Materials

This special purpose index was introduced in 1964, and index numbers were published at quarterly intervals from August 1959 to February 1969, when monthly publication commenced. In addition to its use in connection with the Bureau's constant price estimates in the national accounting field, the index has a direct value as a measure of changes in aggregate cost of materials used in an important part of the building industry (other than house building).

#### Commodities and grouping

The items in this index have been selected as representative of materials used in electrical installation in structures such as hospitals, schools, factories and multi-storeyed commercial buildings and flats. These items are divided into three main groups for which separate indexes are compiled in addition to the 'All groups' index. The combination of materials selected is fixed as to quantity and quality.

#### Price quotations

The items are priced as at the middle of the month for which index numbers are published. The basis of pricing is the price to electrical contractors, delivered on site or into store, metropolitan area, Sydney and Melbourne. The price series used relate to specific standards for each item and in some cases are combinations of prices for different makes, types, etc. The units of quantity specified as the basis for collecting prices are representative lots normally purchased by electrical contractors, inclusive of quantity discounts and packing and quantity extras, etc.



**Method of construction**

The index is a fixed-weights index with the reference base: year 1959-60=100. In general, the weights were derived from information relating to the values of materials used in selected representative projects in Sydney and Melbourne during the three years 1960-61 to 1962-63. The projects selected for this purpose had a minimum electrical materials and labour content of \$10,000. Selected representative items carry the weights of similar items not directly priced. The index is calculated by the method known as 'the weighted arithmetic mean of price relatives'. Base period percentage value weights are applied to indexes of price movement calculated for each period relative to 1959-60.

**Index numbers**

Index numbers for each group of items and for all groups combined for the index of wholesale prices of electrical installation materials are given in the following table. Current index numbers are published monthly in the mimeographed statement *Wholesale Price Indexes—Price Index of Electrical Installation Materials* (9.5).

**WHOLESALE PRICE INDEX OF ELECTRICAL INSTALLATION MATERIALS GROUP  
INDEX NUMBERS, YEARS 1959-60 TO 1970-71 AND MONTHS  
JULY TO DECEMBER 1971**

(Base of each index: Year 1959-60 = 100.0) (a)

<i>Period</i>	<i>Conductors</i>	<i>Conduit and accessories</i>	<i>Switch-board and switch-gear material</i>	<i>All groups</i>
<b>Year—</b>				
1959-60 . . . . .	100.0	100.0	100.0	100.0
1967-68 . . . . .	119.9	106.0	112.5	113.8
1968-69 . . . . .	119.5	107.3	115.3	115.0
1969-70 . . . . .	142.1	109.6	120.1	126.2
1970-71 . . . . .	128.4	112.8	129.2	124.8
<b>1971-72—</b>				
July . . . . .	123.5	117.4	135.1	126.0
August . . . . .	126.6	117.8	135.1	127.4
September . . . . .	127.1	120.1	136.2	128.5
October . . . . .	126.4	120.2	137.2	128.6
November . . . . .	126.4	120.2	137.2	128.6
December . . . . .	126.0	120.2	137.5	128.5

(a) Figures are shown to one decimal place to avoid distortions that would occur in rounding off the index numbers to the nearest whole number.

**EXPORT PRICE INDEXES**

An annual index of export prices has been published by the Bureau since its inception. Brief descriptions of indexes issued between 1901 and 1962 (that is, prior to the introduction of the current Export Price Index) are shown in Year Book No. 55, 1969, pages 256-7.

**The current Export Price Index**

The current Export Price Index was first published in October 1962, but index numbers were compiled back to July 1959. The reference base of this index is: year 1959-60=100. Index numbers from July 1969 have been compiled on an interim basis which incorporates a re-weighting of the items contained in the original index, and the inclusion of some additional items. This interim basis was introduced pending completion of a comprehensive review and re-basing of the index as a whole.

The Export Price Index is a fixed-weights index, and its purpose (as was that of the previous fixed-weights index) is to provide comparisons monthly, over a limited number of years, of the level of export prices of the selected items, making no allowance for variations in quantities exported. The index numbers are thus measures of price change only. The price series used in the index relate to specified standards for each commodity and in most cases are combinations of prices for a number

of representative grades, types, etc. For some commodities price movements in the predominant market, or markets, are used, while for other commodities average realisations in all export markets are used. As nearly as possible, prices used are on the basis f.o.b. at the main Australian ports of export. The index is calculated by the method known as 'the weighted arithmetic mean of price relatives'.

### Composition and weighting

Over the period of ten years between July 1959 and June 1969, there were twenty-nine items in the export price index, and the weights used to combine these were based on average annual values of exports during the years 1956-57 to 1960-61. The twenty-nine items constituted in excess of 80 per cent of the total value of Australian exports in the earlier part of the ten years mentioned: this percentage, however, decreased markedly in more recent years. A review of the content and weighting pattern of the index was consequently undertaken, and an interim series incorporating some of the results of this review was introduced with effect from July 1969.

### Interim basis

The interim series is a fixed-weights export price index, compiled monthly as from June 1969, which has been linked at June 1969 to the current index in its original form. The weights of the items in the interim series are derived from the values of exports for the year 1969-70, and the group weights have been adjusted to reflect the proportion that the value of wool bore to the value of all exports in that year. In addition to the twenty-nine items of the current index as first introduced, the interim series includes the four items; iron ore, bauxite, alumina and mineral sands. These items are not attached to any of the original single groups of the index but are incorporated in the 'All groups' index number from June 1969. The thirty-three items contained in the interim series constituted 74 per cent of the total value of Australian exports (merchandise and non-merchandise) in 1969-70.

### Index numbers

Index numbers for each of the groups and 'All groups' are shown in the following table. The yearly index numbers are simple averages of the twelve monthly index numbers in each year.

#### EXPORT PRICE INDEX NUMBERS, YEARS 1959-60 TO 1970-71 AND MONTHS JULY TO DECEMBER 1971

(Base of each index: year 1959-60 = 100)

Period	Wool	Meats	Dairy produce	Cereals	Dried and canned fruits	Sugar	Hides and tallow	Metals and coal (a)	Gold	All groups
1959-60 .	100	100	100	100	100	100	100	100	100	100
1967-68 .	95	125	79	109	95	67	67	120	104	100
1968-69 .	99	131	72	104	97	72	73	123	117	102
1969-70(b)	87	148	73	96	99	93	94	143	109	(c)103
1970-71 .	67	152	88	100	102	113	94	139	109	101
1971-72—	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)(c)
July .	(d)65	155	113	104	p104	113	90	141	116	p103
August .	63	152	115	104	p104	120	90	138	123	p102
September .	63	146	121	101	p104	109	92	136	118	p100
October .	63	140	125	100	p104	104	91	133	120	p99
November .	63	143	132	98	p104	111	91	132	119	p100
December .	63	141	138	96	p104	106	89	135	121	p100

(a) Comprises coal, iron and steel, copper, zinc, lead and silver. Does not include iron ore, bauxite, alumina and mineral sands, which, however, have been included in the 'All groups' index from July 1969. (b) Interim series linked as at June 1969. (c) Interim series includes, in addition to the specified groups the 4 items: iron ore, bauxite, alumina and mineral sands. (d) Nominal.

**Link between current and previous indexes**

In order to show approximate movements in export prices over a long period, the 'All groups' indexes of the successive series have been linked together at the earliest year for which each of the indexes was compiled. The table below shows this linked series and a long-term price index for wool, which is the most important single component in the movement of the 'All groups' index.

**EXPORT PRICE INDEX NUMBERS—LINKED SERIES 1936-37 TO 1970-71**

(Base of each index: year 1959-60 = 100)

Period	Wool	All groups	Period	Wool	All groups
1936-37 . . . . .	29	30	1953-54 . . . . .	145	125
1937-38 . . . . .	23	27	1954-55 . . . . .	127	114
1938-39 . . . . .	19	22	1955-56 . . . . .	109	105
1939-40 . . . . .	23	26	1956-57 . . . . .	136	117
1940-41 . . . . .	24	28	1957-58 . . . . .	111	102
1941-42 . . . . .	24	28	1958-59 . . . . .	85	90
1942-43 . . . . .	28	30	1959-60 . . . . .	100	100
1943-44 . . . . .	28	31	1960-61 . . . . .	92	95
1944-45 . . . . .	28	34	1961-62 . . . . .	97	96
1945-46 . . . . .	28	39	1962-63 . . . . .	104	101
1946-47 . . . . .	41	54	1963-64 . . . . .	120	114
1947-48 . . . . .	68	75	1964-65 . . . . .	102	105
1948-49 . . . . .	86	88	1965-66 . . . . .	107	107
1949-50 . . . . .	111	101	1966-67 . . . . .	103	105
1950-51 . . . . .	235	173	1967-68 . . . . .	95	100
1951-52 . . . . .	133	125	1968-69 . . . . .	99	102
1952-53 . . . . .	145	128	1969-70(a) . . . . .	87	103
			1970-71 . . . . .	67	101

(a) Interim series linked as at June 1969.

**WAGES, EARNINGS AND HOURS****Arbitration and Wages Boards Acts and associated legislation**

Particulars regarding the operation of Commonwealth and State Laws for the regulation of wages, hours and other conditions of employment were first compiled for the year 1913, and revised particulars have appeared annually in the *Labour Report*. A summary of the Commonwealth legislation and brief particulars of Commonwealth and State industrial tribunals are given in the following paragraphs.

**Commonwealth industrial legislation and tribunals**

Under placitum (xxxv) of Section 51 of the Commonwealth of Australia Constitution, the Commonwealth Parliament is empowered to make laws with respect to 'conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State'. The Parliament has made such a law, namely the *Conciliation and Arbitration Act* 1904-1970.

This Act defines an 'industrial dispute' as:

'(a) A dispute (including a threatened, impending or probable dispute) as to industrial matters which extends beyond the limits of any State; and (b) a situation which is likely to give rise to a dispute as to industrial matters which so extends; and includes—(c) such a dispute in relation to employment in an industry carried on by, or under the control of, a State or an authority of a State; (d) a dispute in relation to employment in an industry carried on by, or under the control of, the Commonwealth or an authority of the Commonwealth, whether or not the dispute extends beyond the limits of any one State; and (e) a claim which an organization is entitled to submit to the Commission under section eleven A of the *Public Service Arbitration Act* 1920-1969 or an application or matter which the Public Service Arbitrator has refrained from hearing, or from further hearing, or from determining under section fourteen A of that Act, whether or not there exists in relation to the claim, application or matter a dispute as to industrial matters which extends beyond the limits of any one State.'



The Conciliation and Arbitration Act was extensively amended by an Act (No. 44 of 1956) assented to on 30 June 1956. This amendment altered the structure of the arbitration machinery by separating the judicial functions from the conciliation and arbitration functions. The Commonwealth Industrial Court was established to deal with judicial matters under the Act, and the Commonwealth Conciliation and Arbitration Commission to handle the functions of conciliation and arbitration. A summary of the provisions of the *Conciliation and Arbitration Act 1904-1970* is given in the following paragraphs.

The Commonwealth Industrial Court is at present composed of a Chief Judge and seven other Judges. The jurisdiction of the Court shall be exercised by not less than two Judges, except in the following circumstances. A single Judge may exercise the jurisdiction of the Court with respect to the dismissal or injury of an employee on account of industrial action, interpretation of awards, questions concerning eligibility of membership of an organisation, disputes between an organisation and its members, and a prescribed matter of practice or procedure. A single Judge may refer a question of law for the opinion of the Court constituted by not less than two Judges. The Court is a Superior Court of Record with the same power to punish contempts of its power and authority as is possessed by the High Court. In general, decisions of the Industrial Court are final; however, an appeal lies to the High Court, but only when the latter grants leave to appeal. The Act provides for the registration of associations of employees and employers, and for inquiries to be held concerning disputed elections in organisations; and certain powers in connection therewith are, by the Act, given to the Industrial Court. Provision is also made for the Commission to exercise the powers of the Court with regard to an application for cancellation of registration of an organisation. Any such change of jurisdiction must be notified by proclamation. This provision could be used if the powers of the Court in this regard were declared, in whole or in part, to be invalid.

Special provision is made concerning the right of audience before the Commonwealth Industrial Court. Briefly, except in proceedings which, in general, involve questions of law or offences against the Act, parties are able to elect whether to appear personally or to be represented by lawyers or officials. Even in proceedings involving questions of law, except appeals from decisions by other Courts to the Industrial Court, on matters arising under this Act or the *Public Service Arbitration Act 1920-1969*, the parties may, if they wish and the Court grants leave, be represented by officials.

The Commonwealth Conciliation and Arbitration Commission at the end of 1971 was composed of a President, six Deputy Presidents, a Senior Commissioner, fourteen Commissioners and three Conciliators. The Commission is empowered to prevent or settle industrial disputes by conciliation or arbitration, and to make suggestions and to do such things as appear right and proper for (a) effecting a reconciliation between parties to industrial disputes; (b) preventing and settling industrial disputes by amicable agreement; and (c) preventing and settling, by conciliation or arbitration, industrial disputes not prevented or settled by amicable agreement. The Commission may exercise its powers of its own motion or on the application of a party.

The President may assign a Commissioner to deal with industrial disputes relating to particular industries, or members of the Commission to deal with a particular industrial dispute. However, subject to the approval of the President, it is the duty of the Senior Commissioner to organise and allocate the work of the Commissioners and Conciliators. When an industrial dispute occurs or is likely to occur, a Commissioner shall take steps for the prompt prevention or settlement of that dispute by conciliation or, if in his opinion conciliation is unlikely to succeed or has failed, by arbitration. A Commissioner may arrange with the Senior Commissioner for a Conciliator to assist the parties to reach an amicable agreement and shall do so if the parties so request. If an agreement is reached, a memorandum of its terms shall be made in writing, and may be certified by the Commission. A certified memorandum shall have the same effect as an award.

Only the Commission in Presidential Session, that is, the Commission constituted by at least three presidential members nominated by the President, has the power to make awards or to certify agreements, concerning standard hours, basic wages and long service leave. Upon application by a party to an industrial dispute, a Commissioner shall consult with the President as to whether in the public interest any matter in dispute should be dealt with by a Commission constituted by not less than three members nominated by the President, at least one of whom shall be a presidential member and one, where practicable, the Commissioner concerned. The President may direct the Commission to hear the matter in dispute; however, after consideration, the Commission may refer the matter in dispute back for determination to the Commissioner originally dealing with the dispute.

An appeal against the decision of a Commissioner shall be heard by not less than three members nominated by the President, of whom at least two shall be presidential members of the Commission. However, an appeal will not be heard unless the Commission considers it necessary as a matter of public interest. The President, after taking account of the views of the parties to a dispute, may

appoint a member of the Commission to take evidence on behalf of a presidential bench of the Commission, so that it may have this evidence before it when it commences its hearing.

Full benches of the Commission not constituted by the same persons may sit in joint session at the direction of the President when he considers it desirable and has the opinion that a question is common to the matters before those benches. A joint session may be held whether the benches concerned are constituted pursuant to the Conciliation and Arbitration Act or the Public Service Arbitration Act, and whether they are constituted to hear references or appeals. However, it is left to each appropriate full bench to determine any of the matters before it.

Provision is also made in the Act for a presidential member of the Commission to handle industrial matters in connection with the maritime industries, the Snowy Mountains Area and the stevedoring industry, except in those matters for which the Act requires that the Commission shall be constituted by more than one member. The Commonwealth Conciliation and Arbitration Commission also deals with disputes and industrial matters, interstate or intra-state, associated with undertakings or projects of the Commonwealth Government which have been declared by the Minister to be Commonwealth projects for the purposes of this Act. In effect, this places employees of Commonwealth projects, so declared, under the jurisdiction of the Commission. The Minister has the power to exempt certain persons or classes of persons working on these projects from the jurisdiction of the Commission.

The Commission may make an award in relation to an industrial dispute concerning employees of a Commonwealth project or when the Public Service Arbitrator refrains from dealing with claims made by a Public Service employee organisation or consents to the claims being presented to the Commission, though such an award may be inconsistent with a law of the Commonwealth relating to salaries, wages, rates of pay or terms or conditions of service of employees in the Public Service as defined by section three of the *Public Service Arbitration Act 1920-1969*, not being the *Commonwealth Employees' Compensation Act 1930-1970*, the *Commonwealth Employees' Furlough Act 1943-1968*, the *Superannuation Act 1922-1969* or any other prescribed Act.

An amendment of the Conciliation and Arbitration Act operative from November 1967 provided for the appointment of a person to be the Flight Crew Officers Industrial Tribunal empowered to prevent or settle industrial disputes relating to pilots, navigators, or flight engineers of aircraft.

The Conciliation and Arbitration Act provides that where a State law, or an order, award, decision or determination of a State industrial authority is inconsistent with or deals with a matter dealt within an award of the Commission, the latter shall prevail, and the former, to the extent of the inconsistency or in relation to the matter dealt with, shall be invalid.

For further particulars regarding Commonwealth arbitration legislation, see the annual *Labour Report*. For information concerning the Australian Stevedoring Industry Authority see the chapter Transport and Communication of this Year Book, and for information on the Coal Industry Tribunal and the Commonwealth Public Service Arbitrator see the *Labour Report*.

### State industrial tribunals

#### New South Wales

The controlling authority is the Industrial Commission of New South Wales, consisting of a President and eight other Judges. Subsidiary tribunals are the Conciliation Commissioners and Conciliation Committees constituted for particular industries. Each Conciliation Committee consists of a Conciliation Commissioner as Chairman and equal numbers of representatives of employers and employees. Special Commissioners with conciliatory powers and limited arbitration powers also may be appointed. The Apprentices Act, 1969 conferred specific powers on the Industrial Commission in relation to certain apprenticeship matters. Compulsory control commenced in 1901, after the earlier Acts of 1892 and 1899 providing for voluntary submission of matters in dispute had proved abortive.

#### Victoria

The authorities are separate Wages Boards for the occupations and industries covered, each consisting of a chairman and equal numbers of representatives of employers and employees, and a Court of Industrial Appeals, the latter presided over by a Judge of the County Court. The system was instituted in the State in 1896, and represented the first example in Australia of legal regulation of wage rates.

#### Queensland

Legal control was first instituted in 1908 with the passing of the Wages Boards Act. 'The Industrial Conciliation and Arbitration Act of 1961' established the Industrial Conciliation and Arbitration Commission and preserved and continued in existence the Industrial Court. The Industrial Court is constituted by the President (a Judge of the Supreme Court of Queensland) sitting alone, and the



Full Industrial Court by the President and two Commissioners. The Conciliation and Arbitration Commission is constituted by a Commissioner sitting alone; and the Full Bench of the Commission by at least three Commissioners. Not more than five Commissioners shall be appointed. A Commissioner shall not be capable of being a member of the Executive Council or of the Legislative Assembly, and shall not take part in the management of any business.

#### South Australia

In South Australia from July 1966 the system of control consists of an Industrial Commission, an Industrial Court, and Conciliation Committees. The Industrial Commission is composed of a President, two Deputy Presidents, and two Commissioners and has power to make awards. The President of the Commission is also Judge of the Industrial Court which deals with legal matters. The two Commissioners are chairmen of each of the Conciliation Committees consisting of an equal number of representatives of employers and employees. These committees issue awards. Where complete agreement cannot be reached in these committees the chairman sits as a Commissioner to determine the unresolved matters. Provision is made for references and appeals to the Full Commission.

#### Western Australia

Legal control dates back to 1900. The present system of control comprises a five-man Western Australian Industrial Commission and an Industrial Appeal Court consisting of three Supreme Court Judges who are nominated by the Chief Justice of Western Australia. A Commissioner may, in relation to any dispute or other matter, refer such matters to the Commission in Court Session. Similarly, appeals from decisions of a single Commissioner are heard by three other Commissioners acting as the Commission in Court Session, but such hearings are restricted to the evidence and matters raised in the proceedings before the single Commissioner. Up to December 1966 the Commission in Court Session fixed and adjusted the basic wage. In December 1966 legislation provided that the Western Australian basic wage rates should be the same as the Commonwealth Six Capitals rates as soon as these exceeded the State rates. However, Commonwealth basic wages were eliminated from Commonwealth awards in July 1967. Western Australian legislation operative from 22 November 1968 fixed the State basic wages for adult males and adult females and provided for the Commission to review the basic wage at least every twelve months (for further details *see* page 270). Appeals from the Commission to the Industrial Appeal Court are limited to matters which are erroneous in law or in excess of jurisdiction. The Court has the power to impose penalties for disobedience of orders made by the Commission.

The Western Australian Coal Industry Tribunal, established under the *Mining Act*, 1904–1969, has power to determine any industrial matter in the coal mining industry. It consists of a chairman and four other members (two representatives each of employers and employees). Boards of reference may be appointed by the Tribunal, and decisions of the Tribunal may be reviewed by the Court of Arbitration on the application of a party subject to the decision.

#### Tasmania

The Authority consists of Wages Boards for separate industries, comprising a Chairman (who is common to all Wages Boards) appointed by the Governor, and equal numbers of representatives of employers and employees appointed by the Minister administering the Act. The system was instituted in 1910.

### **Incidence of industrial awards, determinations and collective agreements**

In May 1968 a survey ascertained the approximate proportions of employees whose wages, salaries and conditions of work were normally varied in accordance with variations in awards, determinations and registered collective agreements of Commonwealth and State industrial authorities. The scope, results, etc. of this survey are published in a statistical bulletin *Survey of the Incidence of Industrial Awards, Determinations and Collective Agreements*, May 1968 (6.5) and in statistical bulletin *Survey of the Incidence of Industrial Awards, Determinations and Collective Agreements*, May 1968 (*Bulletin No. 2*) (6.25).

### **Rates of wage and hours of work**

This section contains indexes (with base: year 1954 = 100) of minimum weekly and hourly rates of wage and standard hours of work for adult males and adult females for Australia and each State. In the indexes there are fifteen industry groups for adult males and eight industry groups for adult females. For relevant periods these indexes replace cognate indexes (base: year 1911 = 1,000 for males and April 1914 = 1,000 for females) published in Year Books before No. 46, 1960. The current



indexes are based on the occupation structure existing in 1954. Weights for each industry and each occupation were derived from two sample surveys made in that year. The first was the Survey of Awards in April 1954 which showed the number of employees covered by individual awards, determinations and collective agreements. This provided employee weights for each industry as well as a basis for the Survey of Award Occupations made in November 1954. This second survey showed the number of employees in each occupation within selected awards, etc. thereby providing occupation weights.

The industrial classification used in the current indexes, shown in the table on page 247, does not differ basically from the previous classification, the alterations being largely in the arrangement of classes. The former Pastoral, agricultural, etc. group and the domestic part of the Amusement, hotels, personal service, etc. group are excluded from the current indexes because of coverage difficulties.

The minimum wage rates and standard hours of work used in the current indexes are for representative occupations within each industry. They have been derived entirely from representative awards, determinations and collective agreements in force at the end of each month or quarter, commencing with March 1939 for adult males and March 1951 for adult females. Particulars have been available as at the end of each month for adult males from January 1957 and for adult females from July 1967. The index for adult males includes rates and hours for 3,415 award designations. However, as some of these designations are operative within more than one industry, or in more than one State, the total number of individual award occupations is 2,313. For adult females the corresponding numbers are 1,100 and 515. Using the industry and occupation weights derived from the surveys described above, these rates and hours were combined to give weighted averages for each industry group for each State and Australia.

Because the indexes are designed to measure movements in prescribed minimum rates of 'wages' as distinct from 'salaries', those awards, etc. which relate solely or mainly to salary earners are excluded.

A more detailed description of the current indexes of minimum rates of wage and standard hours of work is given in the *Labour Report*, which also contains an extensive tabular presentation of the minimum rates of pay for adult males and females in the principal occupations in the capital city of each State. Further particulars of wage rates and index numbers will be found in mimeographed bulletins *Minimum Wage Rates*, March 1939 to June 1965 and *Wage Rates Indexes*, June 1965 to June 1968. Current figures are published in the monthly bulletin *Wage Rates and Earnings*.

#### Weekly wage rates—adult males

The following table shows, for each State and Australia, the weighted average minimum weekly rates of wage payable to adult male workers for a full week's work and index numbers at the dates specified.

#### WEEKLY WAGE RATES: ADULT MALES, ALL GROUPS(a), STATES, DECEMBER 1950 TO 1971

WEIGHTED AVERAGE MINIMUM WEEKLY RATES(b) PAYABLE FOR A FULL WEEK'S WORK  
(EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

End of December—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
RATES OF WAGE(c) (\$)							
1950 . . .	20.62	20.18	19.52	19.79	20.06	19.80	20.20
1960 . . .	36.28	34.99	35.07	34.22	35.81	35.15	35.50
1969 . . .	52.38	51.74	51.91	50.76	50.69	52.00	51.86
1970p. . .	54.22	53.48	55.04	52.11	55.94	54.46	54.06
1971p. . .	61.29	60.98	62.70	58.90	61.71	60.36	61.18
INDEX NUMBERS							
(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)							
1950 . . .	73.0	71.4	69.1	70.1	71.0	70.1	71.5
1960 . . .	128.5	123.9	124.2	121.2	126.8	124.5	125.7
1969 . . .	185.5	183.2	183.8	179.7	179.5	184.1	183.6
1970p. . .	192.0	189.4	194.9	184.5	198.1	192.8	191.4
1971p. . .	217.0	215.9	222.0	208.6	218.5	213.7	216.6

(a) Excludes rural. (b) As prescribed in awards, determinations and collective agreements. (c) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

The following table shows for Australia the weighted average minimum weekly rates of wage and index numbers in each industry group and for all groups (excluding rural) at the dates specified.

**WEEKLY WAGE RATES: ADULT MALES, INDUSTRY GROUPS, AUSTRALIA  
DECEMBER 1950 TO 1971**

WEIGHTED AVERAGE MINIMUM WEEKLY RATES(a) PAYABLE FOR A FULL WEEK'S WORK  
(EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

Industry Group	End of December—				
	1950	1960	1969	1970 <sub>f</sub>	1971 <sub>p</sub>
RATES OF WAGE(b) (\$)					
Mining and quarrying . . . . .	25.96	41.47	59.07	60.83	70.55
Manufacturing—					
Engineering, metals, vehicles, etc. . . . .	20.17	35.02	50.86	51.48	59.05
Textiles, clothing and footwear . . . . .	19.74	34.04	48.18	50.92	57.30
Food, drink and tobacco . . . . .	20.14	35.22	50.35	52.98	58.73
Sawmilling, furniture, etc. . . . .	19.60	34.62	49.93	51.84	58.30
Paper, printing, etc. . . . .	21.42	37.92	55.81	57.47	65.22
Other manufacturing . . . . .	19.76	34.72	50.10	52.33	59.58
All manufacturing groups . . . . .	20.08	35.05	50.65	52.17	59.27
Building and construction . . . . .	19.86	35.75	53.14	56.66	63.38
Railway services . . . . .	19.58	34.65	49.65	51.32	58.33
Road and air transport . . . . .	19.79	35.25	51.34	53.53	60.63
Shipping and stevedoring(c) . . . . .	19.66	34.46	55.75	60.53	64.53
Communication . . . . .	21.33	38.49	64.42	68.95	77.29
Wholesale and retail trade . . . . .	20.08	35.71	51.04	53.81	60.88
Public authority (n.e.i.) and community and business services . . . . .	19.21	34.81	52.57	54.11	62.33
Amusement, hotels, personal service, etc. . . . .	19.23	33.73	47.23	49.16	56.39
All industry groups(d) . . . . .	20.20	35.50	51.86	54.06	61.18
INDEX NUMBERS					
(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)					
Mining and quarrying . . . . .	91.9	146.8	209.2	215.4	249.8
Manufacturing—					
Engineering, metals, vehicles, etc. . . . .	71.4	124.0	180.1	182.3	209.1
Textiles, clothing and footwear . . . . .	69.9	120.5	170.6	180.3	202.9
Food, drink and tobacco . . . . .	71.3	124.7	178.3	187.6	208.0
Sawmilling, furniture, etc. . . . .	69.4	122.6	176.8	183.6	206.4
Paper, printing, etc. . . . .	75.9	134.3	197.6	203.5	230.9
Other manufacturing . . . . .	70.0	122.9	177.4	185.3	211.0
All manufacturing groups . . . . .	71.1	124.1	179.4	184.7	209.8
Building and construction . . . . .	70.3	126.6	188.1	200.6	224.4
Railway services . . . . .	69.3	122.7	175.8	181.7	206.5
Road and air transport . . . . .	70.1	124.8	181.8	189.5	214.7
Shipping and stevedoring(c) . . . . .	69.6	122.0	197.4	214.3	228.5
Communication . . . . .	75.5	136.3	228.1	244.1	273.7
Wholesale and retail trade . . . . .	71.1	126.4	180.7	190.5	215.6
Public authority (n.e.i.) and community and business services . . . . .	68.0	123.2	186.1	191.6	220.7
Amusement, hotels, personal service, etc. . . . .	68.1	119.4	167.2	174.1	199.7
All industry groups(d) . . . . .	71.5	125.7	183.6	191.4	216.6

(a) As prescribed in awards, determinations and collective agreements. (b) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends. (c) Includes the value of keep where supplied. (d) Excludes rural.

*Adult males—jurisdiction.* Weighted average minimum weekly wage rates for adult males covered by *Commonwealth awards etc.* and for those covered by *State awards etc.* (as defined below) are shown separately in the following table. For the purposes of the index, *Commonwealth awards etc.* include awards of, or collective agreements registered with, the Commonwealth Conciliation and Arbitration Commission, and determinations of the Commonwealth Public Service Arbitrator. *State awards etc.* include awards or determinations of, or collective agreements registered with, State industrial tribunals, together with certain unregistered collective agreements when these are dominant in the particular industries to which they refer.

#### WEEKLY WAGE RATES (a): ALL GROUPS—ADULT MALES, DECEMBER 1950 TO 1971

(\$)

WEIGHTED AVERAGE MINIMUM WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME)  
AS PRESCRIBED IN AWARDS, DETERMINATIONS AND COLLECTIVE AGREEMENTS

Jurisdiction	End of December—				
	1950	1960	1969	1970p	1971p
Commonwealth awards, etc. . . . .	20.18	35.14	52.10	53.52	60.94
State awards, etc. . . . .	20.23	35.88	51.61	54.65	61.44
All awards, etc. . . . .	20.20	35.50	51.86	54.06	61.18

(a) Excludes rural. The amounts should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends. For definitions see text above.

#### Weekly wage rates—adult females

The following table shows, for each State and Australia, the weighted average minimum weekly rates of wage payable to adult female workers for a full week's work and index numbers at the dates specified. This series has not been compiled for years prior to 1951.

#### WEEKLY WAGE RATES: ADULT FEMALES, STATES, DECEMBER 1951 TO 1971

WEIGHTED AVERAGE MINIMUM WEEKLY RATES(a) PAYABLE FOR A FULL WEEK'S WORK  
(EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

End of December—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
RATES OF WAGE(b) (\$)							
1951 . . . . .	17.23	17.22	16.12	17.02	16.25	16.56	17.03
1960 . . . . .	26.12	24.66	23.93	24.29	25.12	23.88	25.17
1969 . . . . .	38.69	37.08	37.64	35.94	36.68	36.94	37.70
1970p . . . . .	40.65	38.64	40.58	37.49	40.02	38.17	39.66
1971p . . . . .	48.53	45.34	46.32	43.69	44.71	44.00	46.59

#### INDEX NUMBERS

(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)

1951 . . . . .	86.6	86.5	81.0	85.5	81.6	83.2	85.6
1960 . . . . .	131.2	123.9	120.2	122.0	126.2	120.0	126.4
1969 . . . . .	194.4	186.2	189.0	180.5	184.2	185.6	189.4
1970p . . . . .	204.2	194.1	203.8	188.3	201.0	191.7	199.2
1971p . . . . .	243.8	227.8	232.7	219.4	224.6	221.0	234.0

(a) As prescribed in awards, determinations and collective agreements. (b) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

The following table shows for Australia weighted average minimum weekly rates of wage and index numbers in each of the industry groups in which the number of females employed is important, and the weighted average for all groups combined, at the dates specified.



**WEEKLY WAGE RATES: ADULT FEMALES, INDUSTRY GROUPS, AUSTRALIA  
DECEMBER 1951 TO 1971**

**WEIGHTED AVERAGE MINIMUM WEEKLY RATES(a) PAYABLE FOR A FULL WEEK'S WORK  
(EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES**

Industry Group	End of December—				
	1951	1960	1969	1970p	1971p
<b>RATES OF WAGE(b) (\$)</b>					
Manufacturing—					
Engineering, metals, vehicles, etc. . .	17.09	24.98	37.07	40.24	48.76
Textiles, clothing and footwear . . .	17.12	24.07	34.77	36.59	43.20
Food, drink and tobacco . . . . .	16.58	24.63	36.12	38.22	43.18
Other manufacturing . . . . .	16.88	24.80	36.68	37.79	44.57
<i>All manufacturing groups</i> . . . .	16.99	24.46	35.77	37.72	44.48
Transport and communication . . . .	17.75	26.02	40.87	43.91	51.56
Wholesale and retail trade . . . . .	17.11	26.36	39.87	42.12	49.28
Public authority (n.e.i.) and community and business services . . . . .	17.01	25.78	40.49	41.92	48.20
Amusement, hotels, personal service, etc. .	16.68	24.50	36.71	37.97	45.30
<i>All industry groups</i> . . . . .	17.03	25.17	37.70	39.66	46.59

**INDEX NUMBERS**

*(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)*

Manufacturing—					
Engineering, metals, vehicles, etc. . .	85.9	125.5	186.2	202.1	244.9
Textiles, clothing and footwear . . .	86.0	120.9	174.7	183.8	217.0
Food, drink and tobacco . . . . .	83.3	123.7	181.4	192.0	216.9
Other manufacturing . . . . .	84.8	124.6	184.2	189.8	223.9
<i>All manufacturing groups</i> . . . .	85.4	122.9	179.7	189.5	223.5
Transport and communication . . . .	89.2	130.7	205.3	220.5	259.0
Wholesale and retail trade . . . . .	85.9	132.4	200.3	211.6	247.5
Public authority (n.e.i.) and community and business services . . . . .	85.4	129.5	203.4	210.6	242.1
Amusement, hotels, personal service, etc. .	83.8	123.1	184.4	190.7	227.6
<i>All industry groups</i> . . . . .	85.6	126.4	189.4	199.2	234.0

(a) As prescribed in awards, determinations and collective agreements. (b) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

### Standard hours of work

In the fixation of weekly wage rates most industrial tribunals prescribe the number of hours constituting a full week's work (excluding overtime) for the wage rates specified. The hours of work so prescribed form the basis of the compilation of the weighted averages and index numbers on page 250. The main features of the reduction of hours to forty-four and later to forty per week are summarised in previous issues of the Year Book. Since January 1948 practically all employees in Australia have had a standard working week of forty hours or less.

### Hourly wage rates

The average rates of wage in the preceding tables are based on the minimum rates prescribed for selected occupations in awards, etc. for a full week's work, excluding overtime. However, the number of hours constituting a full week's work differs in some instances between various occupations in each State, and between the same occupations in the several States. For some purposes a better comparison may be obtained by reducing the results in the preceding paragraphs to a common basis, namely the rate of wage per hour. The particulars of weighted average minimum hourly rates of wage given in the following tables relate to all industry groups except rural, and shipping and stevedoring.

The rural industry is not included in the index, and shipping and stevedoring has been excluded because, for some of the occupations in this group, definite particulars for the computation of average working hours and hourly rates of wage are not available.

The following table shows the weighted average minimum hourly rates of wage payable to adult male workers and index numbers of hourly rates in each State.

**HOURLY WAGE RATES(a): ADULT MALES  
STATES, DECEMBER 1950 TO 1971**

**WEIGHTED AVERAGE MINIMUM HOURLY RATES PAYABLE AND INDEX NUMBERS OF HOURLY RATES**

<i>End of December—</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
<b>RATES OF WAGE(b)</b>							
(cents)							
1950 . . .	51.63	50.48	48.83	49.53	50.29	49.52	50.58
1960 . . .	90.91	87.57	87.79	85.61	89.89	88.08	88.92
1969 . . .	130.87	129.22	129.57	126.62	126.84	129.55	129.53
1970p. . .	135.62	133.40	137.43	129.71	139.98	135.43	135.01
1971p. . .	154.05	152.37	157.09	146.93	154.60	150.60	153.27

**INDEX NUMBERS**

*(Base: Weighted Average Hourly Wage Rate for Australia, 1954 = 100)*

1950 . . .	73.0	71.4	69.0	70.0	71.7	70.0	71.5
1960 . . .	128.5	123.8	124.1	121.0	127.1	124.5	125.7
1969 . . .	185.0	182.6	183.1	179.0	179.3	183.1	183.1
1970p. . .	191.7	188.6	194.2	183.3	197.9	191.4	190.8
1971p. . .	217.7	215.4	222.0	207.7	218.5	212.9	216.6

(a) Weighted average hourly rates of wage for all industry groups except rural, and shipping and stevedoring. See page 249. (b) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

The following table shows the weighted average minimum hourly rates of wage payable to adult female workers and index numbers of hourly rates in each State.

**HOURLY WAGE RATES: ADULT FEMALES  
STATES, DECEMBER 1951 TO 1971**

**WEIGHTED AVERAGE MINIMUM HOURLY RATES PAYABLE AND INDEX NUMBERS OF HOURLY RATES**

<i>End of December—</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
<b>RATES OF WAGE(a)</b>							
(cents)							
1951 . . .	43.58	43.25	40.60	42.81	40.85	41.86	42.92
1960 . . .	66.09	61.94	60.28	61.08	63.14	60.37	63.44
1969 . . .	97.89	93.14	94.80	90.37	92.19	93.23	95.04
1970p. . .	102.87	97.07	102.21	94.28	100.59	96.32	99.99
1971p. . .	122.79	113.90	116.68	109.86	112.37	111.04	117.45

**INDEX NUMBERS**

*(Base: Weighted Average Hourly Wage Rate for Australia, 1954 = 100)*

1951 . . .	86.9	86.2	80.9	85.3	81.4	83.4	85.6
1960 . . .	131.7	123.5	120.1	121.7	125.8	120.3	126.4
1969 . . .	195.1	185.7	189.0	180.1	183.8	185.8	189.4
1970p. . .	205.0	193.5	203.7	187.9	200.4	192.0	199.3
1971p. . .	244.7	227.0	232.6	219.0	224.0	221.3	234.1

(a) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

**Weighted average standard weekly hours of work**

The 40-hour week has operated in Australia generally from 1 January 1948. However, as stated on page 248, the number of hours constituting a full week's work (excluding overtime) differs between occupations and or between States. The weighted average standard hours of work (excluding overtime) prescribed in awards, determinations and collective agreements for a full working week, in respect of adult male workers in all industry groups except rural, and shipping and stevedoring, at 31 December 1971, were: New South Wales, 39.78; Victoria, 39.97; Queensland, 39.89; South Australia, 39.96; Western Australia, 39.85; Tasmania, 39.93; Australia, 39.87. Corresponding figures for adult female workers at 31 December 1971 were: New South Wales, 39.53; Victoria, 39.81; Queensland, 39.70; South Australia, 39.77; Western Australia, 39.78; Tasmania, 39.63; Australia, 39.67.

**Average Weekly Earnings**

The figures in this section are derived from particulars of employment and wages and salaries recorded on payroll tax returns, from other direct collections and from estimates of the unrecorded balance. The figures relate to civilians only. In addition to salary and wage payments at award rates, the total earnings figures used in the calculation of average weekly earnings include the earnings of employees not covered by awards, overtime earnings, over-award and bonus payments, payments made in advance or retrospectively during the period, etc.

The series was revised during 1971 to incorporate new employment estimates based on the results of the 1966 population census. At the same time a number of refinements to the method of estimation were introduced. For example, an analysis of data obtained through surveys carried out in 1966 and 1967 enabled an explicit allowance to be made for the effect of multiple jobholding and data from a survey in November 1969 gave a more accurate indication of average earnings in fields not covered by payroll tax returns and other direct collections.

Particulars of wages and salaries paid are not available for males and females separately from the sources used for this series; average weekly earnings have therefore been calculated in terms of male units, i.e. total male employees plus a proportion of female employees, the proportion being determined by the estimated ratio of female to male average earnings. Information from the annual surveys of weekly earnings and hours, from a sample survey carried out in November 1969 and from other sources, has been used to estimate the percentages for individual States. The ratios used for the current series from September quarter 1966 are as follows: New South Wales (including the Australian Capital Territory) 54 per cent, Victoria 53, Queensland 52, South Australia (including the Northern Territory) 50, Western Australia 49 and Tasmania 49. As the number of male units used in calculating Australian average weekly earnings is the sum of the estimates for the States, a separate ratio for Australia as a whole is not used, but the weighted average of the State ratios is approximately 52.5 per cent.

Annual averages for each State and Australia for the years 1966-67 to 1971-72 are shown in the table below.

**AVERAGE WEEKLY EARNINGS PER EMPLOYED MALE UNIT(a), 1966-67 TO 1971-72**  
(£)

<i>Period</i>	<i>N.S.W.(b)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(c)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
1966-67 . .	63.50	63.90	57.10	57.60	59.20	58.40	61.70
1967-68 . .	67.00	67.60	60.20	61.10	63.90	61.90	65.30
1968-69 . .	72.70	72.10	64.30	65.20	68.70	65.60	70.20
1969-70 . .	78.80	78.10	69.20	70.90	75.50	70.80	76.10
1970-71 . .	87.90	86.20	77.80	78.40	84.60	78.70	84.70
1971-72 . .	96.70	93.80	87.00	86.80	93.60	87.20	93.20

(a) See explanatory notes above.

(b) Includes the Australian Capital Territory.

(c) Includes the Northern Territory.

Because of the adoption of a new definition of the labour force at the June 1966 population census, there is a break in comparability between June and September quarters of 1966 in the employment series used in the calculation of average weekly earnings. For this and other reasons (in particular, the lack of precise information about the ratios of female to male earnings in the several States for 1965-66 and earlier years), it is not possible to make a comparable series of State estimates for periods prior to September quarter 1966. However, in order to provide a broad indication of trends over a longer period, estimates for Australia as a whole have been calculated for the period back to September



quarter 1961 by methods and on a basis that are as nearly as possible comparable with those used for the current series. Annual averages for this period are: 1961-62, \$47.60; 1962-63, \$48.90; 1963-64, \$51.50; 1964-65, \$55.30; 1965-66, \$57.90.

For current statistics in this series reference should be made to the quarterly publication *Average Weekly Earnings* (6.18). Further information on the revision of the series, and revised data for each quarter from September quarter 1961 were published in *Average Weekly Earnings, September Quarter 1961 to June Quarter 1971*.

### Surveys of wage rates, earnings and hours, 1960 to 1971

Since 1960 a number of statistical surveys of wages and hours of work in Australia have been undertaken by this Bureau. The object of these surveys has been to obtain information on wage rates, actual weekly earnings and hours of work on a more comprehensive scale than previously available in Australia. A summary of the scope and coverage of each of these surveys is shown on the following pages.

#### Survey of wage rates and earnings, September 1960

For information on the results of this survey see Year Book No. 51, pages 439-42.

#### Survey of weekly earnings, October 1961

The results of this survey were published in Year Book No. 51, pages 442-4.

#### Surveys of weekly earnings and hours, October 1962 to 1971 (excluding October 1965)

For details of these surveys see pages 261-6.

#### Survey of weekly earnings, October 1965

A survey of weekly earnings of male employees was conducted for the last pay-period in October 1965. The survey was conducted by means of: (i) a sample of private employers subject to pay-roll tax (that is those paying more than \$400 a week in wages and salaries); (ii) a complete coverage of Commonwealth and State government departments and semi-government authorities; and (iii) a sample of local government authorities. It related to certain specified industry groups only.

The object of the survey was to obtain estimates of the numbers and proportions of full-time adult male employees in various weekly earnings groups and a dissection of total weekly earnings paid to full-time adult males into: (i) overtime earnings; (ii) ordinary time earnings at 'award, etc. rates'; and (iii) ordinary time earnings in excess of those at 'award, etc. rates' (divided into (a) payment by measured result and (b) other) as defined. The survey also provided figures of average weekly earnings for full-time adult male and junior male employees. Separate details were obtained for (i) managerial, executive, professional and higher supervisory staff, and (ii) other full-time male employees. Results of this survey were published in detail in *Labour Report* No. 52, 1965 and 1966.

### Survey of weekly earnings (size distribution), May 1971

#### General

A survey of weekly earnings of adult male employees was conducted for the pay-period which included 12 May 1971. A summary of the results of this survey is given in the following pages. Detailed results were published in the bulletin, *Survey of Weekly Earnings (Size Distribution)*, May 1971 (6.30).

The object of the survey was to obtain estimates of the numbers and proportions of full-time adult male employees (paid for a full week) in various total weekly earnings groups, average weekly total earnings for these employees, and a dissection of average weekly total earnings into average weekly overtime earnings and average weekly ordinary time earnings. Separate details were obtained for (a) male managerial, executive, professional and higher supervisory staff, and (b) other full-time adult male employees. Similar statistics were last obtained from a survey of weekly earnings in October 1965 (see above) but that survey did not have as wide an industry scope as this current survey. The current survey excluded employees of private employers not subject to pay-roll tax; employees in rural industry and private domestic service; employees of religious, benevolent and other similar organisations exempt from pay-roll tax (other than public hospitals and government institutions); and waterside workers employed on a casual basis.

Because this survey was confined to full-time adult male employees *paid for a full working week*, and for other reasons, the average weekly earnings for private employees shown in the following tables are not directly comparable with the average earnings for full-time adult males obtained from the annual October surveys of weekly earnings and hours (see pages 261–6).

### Scope of survey

The survey was conducted by means of stratified random samples of (i) private employers subject to pay-roll tax (that is those, other than exempt employers, paying more than \$400 a week in wages and salaries), (ii) public hospitals, and (iii) local government authorities; and in addition a complete coverage of (iv) Commonwealth and State government departments, government authorities and semi-government bodies. In the published results 'private employees' refer to those covered by categories (i) and (ii) and 'government employees' refer to those covered by categories (iii) and (iv). There were 4,995 private employers surveyed. The survey results are representative of 2,212,600 full-time adult male employees made up of 1,500,600 full-time adult males in private employment and 712,000 in government employment.

The estimates of private and government employees do not correspond to the estimates of total male civilian employment in the specified industry groups published by this Bureau. This is mainly because the sample of private employers was restricted to those subject to pay-roll tax and these employers were generally classified to the industry group of their major activity, and because the information obtained in the survey related to full-time adult male employees (as defined).

As the private sector of the survey and the local government collections were based on samples, the resultant estimates are subject to sampling variability, that is, variations which might occur by chance because only a sample of employers was surveyed. The extent of the detail published has been determined after considering estimated measures of sampling variability. For further information on sampling variability see the bulletin *Survey of Weekly Earnings (Size Distribution)*, May 1971 (6.30) mentioned above.

### Results of the survey

The estimates are shown for full-time adult males classified by industry groups and by States, and distinguishing government and private employment. They reflect the effects of differences—both as between States and as between government and private employment—in amounts paid for the various occupations; in amounts paid for the same occupations; in occupational structure within industries; and in industry structure.

Employers (private and government) were asked to give reasons for low earnings of any full-time adult male employees included in specified lower weekly earnings groups. These groups, which varied from State to State, were established after considering the rates of minimum wage for adult males. The earnings groups selected for each State were as follows: up to \$45.99 a week in New South Wales, Victoria, Queensland and the Australian Capital Territory; up to \$44.99 a week in South Australia; up to \$48.99 a week in Western Australia; up to \$46.99 a week in Tasmania; and up to \$47.99 a week in the Northern Territory. From comments made by respondents it was possible to omit from these lower weekly earnings groups any adult males incorrectly included because they were not paid for a full week. Those males in these earnings groups who were confirmed as full-time adult males being paid for a full week were estimated to represent approximately 2,600 adult males employees. They were reported as being: (i) males paid for normal weekly hours of 30 or more (survey definition of full-time) but less than standard weekly hours (49.3 per cent); (ii) males paid according to award, etc. provisions, males not subject to awards, and males receiving board and lodging, etc. (29.6 per cent); (iii) males paid by commission (3.4 per cent); (iv) trainees, cadets, etc. (7.1 per cent); (v) handicapped, slow workers, pensioners, etc. (8.3 per cent); and (vi) other males (2.3 per cent). There may have been some adult males incorrectly shown in the higher weekly earnings groups who were not paid for a full week. It was not possible to ensure that all such employees were omitted from these estimates.

On the return forms the categories 'Managerial, executive, professional and higher supervisory staff' and 'All other full-time employees' were defined as set out below. In the case of private employers the allocation of employees between these categories depended on the judgment of the individual employers completing the returns. In the case of government employers 'managerial, etc. staff' were generally defined as—(i) those employees who do not receive payment for overtime, and (ii) those employees who, although subject to payment for overtime, were in charge of a significant number of employees in a separate establishment (or establishments). Thus the concept of full-time adult male managerial, etc. staff and other employees may differ between the private and government sectors of the survey and this may affect the relative level of the estimates for these categories of employees in the two sectors.



The classification of weekly earnings groups specified in the survey for managerial, etc. staff differed from that specified for non-managerial employees. Tables on page 255 present details for the earnings groups specified for non-managerial employees and tables on page 256 the details for the earnings groups specified for managerial, etc. staff. Tables on page 257 present a combination of the two classifications of employees according to abridged earnings groups. In this combination the 18,100 managerial, etc. staff shown in the tables on page 256 as earning 'up to \$79.99' have been included in the '\$75.00—\$79.99' group. Thus the figures for all earnings groups below \$80 in the tables on page 257 are subject to some distortion.

It is known that some private employees in the Northern Territory and the Australian Capital Territory are included on the pay-roll tax returns for some of the States. Thus these employees would not have been included in the survey estimates of private employees in the two territories. Therefore, the survey estimates shown for private employees, and for combinations of private and government employees, in the Northern Territory and the Australian Capital Territory differ from the estimates that would have been obtained if all relevant employees in the territories had been recorded separately.

The estimates of average weekly earnings shown in the following tables have been rounded to the nearest 10 cents. The estimated number of employees in the various weekly earnings groups have been rounded to the nearest hundred. For these reasons, the sums of components in the tables may not add to the totals shown.

### Definitions

The following definitions refer to terms used in the survey and in the following tables.

*Adult males* include all male employees 21 years of age and over and those male employees who, although under 21 years of age, are paid at the adult male rate for their occupation. All other male employees under 21 years of age are excluded.

*Number of adult male employees* refers to all adult male employees (as defined above) who received pay for the pay-period which included 12 May 1971.

*Full-time adult male employees* are those adult male employees whose normal hours of work are 30 or more a week and who were paid for their full normal hours of work for the pay-period which included 12 May 1971. Included are full-time adult male employees on paid annual leave, paid sick leave, long service leave and paid holidays taken during the specified pay-period if they received pay for their full normal hours of work. Excluded are 'full-time' adult male employees on short-time; 'full-time' adult male employees who began or ceased work during the pay-period; and all adult male employees absent without pay (for any reason) during the pay-period.

Full-time adult males were classified according to whether they were *managerial, executive, professional and higher supervisory staff* (who were not further defined) or *all other full-time adult male employees* (i.e. other than managerial, etc. staff). The non-managerial employees include full-time adult male minor supervisory employees, leading hands, clerical and office staff as well as ordinary wages employees. See also last paragraph on page 253.

*Private employees* are employees of private employers subject to pay-roll tax and of all public hospitals. *Government employees* are employees of Commonwealth and State government departments, government authorities and semi-government bodies, and of local government authorities.

*Total gross weekly earnings* refers to gross earnings of adult male employees before taxation and other deductions have been made, for the pay-period which included 12 May 1971. Included are overtime earnings, ordinary time earnings, shift allowances, penalty rates, commission and similar payments; and that part of paid annual leave, paid sick leave, long service leave and paid holidays taken during the specified pay-period. Included are one week's proportion of payments made other than on weekly basis, e.g. salary paid fortnightly or monthly; paid annual and other leave taken during the specified pay-period; periodical payments under incentive, piecework, profit sharing schemes, etc; commissions; annual or periodical bonuses, etc. Excluded are any retrospective payments.

Total gross weekly earnings for *all other full-time adult male employees* (i.e. other than managerial, executive, etc. staff) are dissected into overtime earnings and ordinary time earnings.

*Overtime earnings* refers to that part of total gross weekly earnings (as defined above) for man-hours paid for in excess of award, standard or agreed hours of work. (The figures of average overtime earnings shown in tables on pages 258–60 are not average overtime earnings of only those employees who worked overtime, but are averages for all employees in the specified category whether or not they worked overtime.)

*Ordinary time earnings* refers to that part of total gross weekly earnings (as defined above) for award, standard or agreed hours of work. Included in relation to these hours are shift allowances, penalty rates, commissions, bonuses and incentive payments, and payments for annual and other leave taken during the specified week.



Details of numbers of full-time adult male employees in various earnings groups were obtained only in relation to total weekly earnings (i.e. including overtime earnings).

NUMBER OF FULL-TIME ADULT MALE EMPLOYEES (OTHER THAN MANAGERIAL, ETC. STAFF): TOTAL WEEKLY EARNINGS GROUPS, MAY 1971(a)  
ALL INDUSTRY GROUPS(b), STATES  
TOTAL (PRIVATE AND GOVERNMENT) EMPLOYEES  
(<sup>'000</sup>)

Total weekly earnings group (\$)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. (c)	A.C.T. (c)	Aust.
Up to 43.99				*					1.1
44.00-44.99	1.4	0.3	0.7	0.6					0.7
45.00-45.99				0.3	0.1				1.3
46.00-46.99	1.0	1.1	2.2	0.3					4.8
47.00-47.99	1.8	1.0	1.7	0.9					5.7
48.00-48.99	1.8	1.4	1.9	1.0		1.1		0.1	6.6
49.00-49.99	2.3	1.7	1.7	1.0	1.5		0.1		8.8
50.00-51.99	7.8	6.0	4.5	3.3	2.1	1.0	0.1	0.1	24.8
52.00-53.99	10.0	7.5	4.7	3.9	2.0	1.4	0.1	0.1	29.8
54.00-55.99	11.7	10.6	7.9	4.2	3.6	1.7	0.2	0.1	40.1
56.00-57.99	14.5	12.6	10.8	4.6	3.3	1.7	0.1	0.2	47.9
58.00-59.99	18.0	14.1	8.8	6.6	3.7	1.9	0.2	0.3	53.6
60.00-64.99	52.9	40.3	21.9	17.2	9.9	5.4	0.4	1.2	149.1
65.00-69.99	53.5	44.0	23.6	19.5	12.9	6.0	0.5	1.2	161.2
70.00-74.99	62.1	47.6	24.1	17.6	13.4	5.9	0.6	1.2	172.6
75.00-79.99	64.5	47.6	19.5	14.9	11.5	5.3	0.7	1.4	165.3
80.00-84.99	64.4	44.7	15.8	16.0	11.3	4.9	0.7	1.4	159.2
85.00-89.99	55.3	39.0	12.4	15.0	10.3	3.7	0.7	1.9	138.2
90.00-99.99	87.8	59.4	20.9	19.7	16.0	5.4	1.2	2.2	212.6
100.00-119.99	115.8	78.3	25.0	21.3	21.1	6.1	2.3	4.4	274.4
120.00 and over	95.7	63.8	24.3	15.1	24.7	6.4	3.6	7.0	240.6
Total	722.0	521.1	232.4	182.9	147.7	58.0	11.4	22.8	1,898.4

(a) Pay-period which included 12 May 1971. For definitions and explanatory notes, see pages 252-4. (b) Excludes rural industry, and private domestic service. (c) See second paragraph page 254.

\* Less than 50 employees.

NUMBER OF FULL-TIME ADULT MALE EMPLOYEES (OTHER THAN MANAGERIAL, ETC. STAFF): TOTAL WEEKLY EARNINGS GROUPS, MAY 1971(a)  
INDUSTRY GROUPS, AUSTRALIA

Total weekly earnings group (\$)	Manufacturing groups			All industry groups(b)			Total (private and government)		
	Founding, engineering, vehicles, etc.	Other	Total manufacturing	Non-manufacturing groups	Private employees	Government employees	Number	Percentage	Cumulative percentage
Up to 43.99				—'000—		0.3	1.1	%	%
44.00-44.99	0.7	0.7	1.4	1.7	2.4	0.1	0.7	(c)	0.1
45.00-45.99						0.2	1.3	0.1	0.2
46.00-46.99	2.3	1.3	2.4	2.4	3.0	1.7	4.8	0.3	0.4
47.00-47.99		1.7	2.9	2.8	4.1	1.6	5.7	0.3	0.7
48.00-48.99	1.3	1.7	3.1	3.6	4.4	2.2	6.6	0.3	1.1
49.00-49.99	1.4	2.4	3.8	5.0	6.0	2.8	8.8	0.5	1.5
50.00-51.99	4.7	6.7	11.4	13.4	17.2	7.6	24.8	1.3	2.8
52.00-53.99	5.3	7.3	12.7	17.1	20.2	9.5	29.8	1.6	4.4
54.00-55.99	6.3	10.3	16.6	23.5	27.9	12.2	40.1	2.1	6.5
56.00-57.99	7.2	10.8	18.0	29.8	30.8	17.1	47.9	2.5	9.0
58.00-59.99	10.0	12.7	22.8	30.8	36.3	17.2	53.6	2.8	11.9
60.00-64.99	26.2	32.1	58.3	90.8	102.8	46.3	149.1	7.9	19.7
65.00-69.99	27.8	35.0	62.8	98.4	111.0	50.3	161.2	8.5	28.2
70.00-74.99	33.6	35.6	69.2	103.4	113.4	59.1	172.6	9.1	37.3
75.00-79.99	31.9	35.9	67.7	97.5	114.4	50.9	165.3	8.7	46.0
80.00-84.99	29.9	31.5	61.4	97.8	108.5	50.7	159.2	8.4	54.4
85.00-89.99	29.3	25.4	54.7	83.5	91.2	47.0	138.2	7.3	61.7
90.00-99.99	47.9	39.4	87.3	125.3	142.3	70.2	212.6	11.2	72.9
100.00-119.99	59.9	45.5	105.5	169.0	171.6	102.8	274.4	14.5	87.3
120.00 and over	40.3	31.8	72.1	168.5	144.3	96.3	240.6	12.7	100.0
Total	366.0	368.0	734.0	1,164.4	1,251.8	646.6	1,898.4	100.0	..

(a) Pay-period which included 12 May 1971. For definitions and explanatory notes, see pages 252-4. (b) Excludes rural industry, and private domestic service. (c) Less than 0.05 per cent.

NUMBER OF FULL-TIME ADULT MALE MANAGERIAL, ETC. STAFF (a)  
TOTAL WEEKLY EARNINGS GROUPS, MAY 1971(b)  
ALL INDUSTRY GROUPS(c), STATES  
TOTAL (PRIVATE AND GOVERNMENT) EMPLOYEES  
(<sup>'000</sup>)

Total weekly earnings group (\$)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. (d)	A.C.T. (d)	Aust.
Up to 79.99 .	5.3	5.3	3.3	2.6	1.1	0.6	0.1	0.3	18.1
80.00- 99.99 .	16.8	16.5	6.5	3.8	3.9	1.8			49.6
100.00-119.99 .	23.9	19.3	6.6	5.0	4.7	1.8	0.2	0.4	61.9
120.00-139.99 .	22.4	15.4	4.6	3.7	4.0	1.3	0.3	0.5	52.2
140.00-159.99 .	16.9	11.6	3.7	3.3	3.1	0.9	0.2	0.4	40.2
160.00-179.99 .	11.3	9.5	2.8	1.9	2.1	0.6	0.2	0.5	28.8
180.00-199.99 .	7.8	6.8	1.7	1.2	1.5	0.4	0.1	1.1	20.7
200.00-219.99 .	5.5	5.1	1.2	0.8	0.9	0.3	0.1	0.6	14.5
220.00-239.99 .	3.5	2.7	0.6	0.4	0.6	0.2		0.4	8.4
240.00-259.99 .	2.7	1.8	0.4	0.4	0.4	0.2		0.4	6.3
260.00-279.99 .	1.2	1.2	0.2	0.2	0.2	0.1	0.1	0.2	3.4
280.00-299.99 .	1.9	1.0	0.3	0.3	0.2	0.1		0.2	3.9
300.00 and over .	2.7	2.5	0.2	0.2	0.3	0.1		0.2	6.2
Total .	122.0	98.8	31.9	23.8	23.1	8.1	1.4	5.2	314.2

(a) See last paragraph on page 253 concerning differences between the reporting practices of private and government employers in the classification of managerial, etc., staff. (b) Pay-period which included 12 May 1971. For definitions and explanatory notes, see pages 252-4. (c) Excludes rural industry, and private domestic service. (d) See second paragraph, page 254.

NUMBER OF FULL-TIME ADULT MALE MANAGERIAL, ETC. STAFF(a)  
TOTAL WEEKLY EARNINGS GROUPS, MAY 1971(b)  
INDUSTRY GROUPS, AUSTRALIA

Total weekly earnings group (\$)	All industry groups(c)		Total (private and government)				
			Manu- facturing groups	Non-manu- facturing groups	Private employees (a)	Government employees (a)	
							Number Percentage Cumulative percentage
Up to 79.99 .		6.6	11.6	17.4	0.8	18.1	5.8
80.00- 99.99 .		19.5	30.0	46.8	2.8	49.6	15.8
100.00-119.99 .		24.3	37.5	57.0	4.9	61.9	19.7
120.00-139.99 .		19.1	33.2	44.6	7.6	52.2	16.6
140.00-159.99 .		12.3	27.9	29.6	10.6	40.2	12.8
160.00-179.99 .		7.3	21.6	17.5	11.3	28.8	9.2
180.00-199.99 .		3.9	16.9	10.9	9.8	20.7	6.6
200.00-219.99 .		3.2	11.3	8.2	6.3	14.5	4.6
220.00-239.99 .		1.6	6.8	4.5	3.9	8.4	2.7
240.00-259.99 .		1.2	5.1	3.3	3.0	6.3	2.0
260.00-279.99 .		0.7	2.7	1.9	1.5	3.4	1.1
280.00-299.99 .		0.6	3.3	2.3	1.6	3.9	1.2
300.00 and over .		1.5	4.8	4.8	1.5	6.2	2.0
Total .		101.7	212.5	248.8	65.5	314.2	100.0

[(a) See last paragraph on page 253 concerning differences between the reporting practices of private and government employers in the classification of managerial, etc., staff. (b) Pay-period which included 12 May 1971. For definitions and explanatory notes, see pages 252-4. (c) Excludes rural industry, and private domestic service.

NUMBER OF MANAGERIAL, ETC. STAFF AND ALL OTHER FULL-TIME ADULT MALES  
TOTAL WEEKLY EARNINGS GROUPS, MAY 1971(a)  
ALL INDUSTRY GROUPS (b), STATES  
TOTAL (PRIVATE AND GOVERNMENT) EMPLOYEES  
(<sup>'000</sup>)

Total weekly earnings group (\$)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. (c)	A.C.T. (c)	Aust.
Up to 43.99									1.1
44.00-44.99				*					0.7
45.00-45.99	1.4	0.3	0.7	0.6	0.1	*	*	*	1.3
46.00-46.99	1.0	1.1	2.2	0.3					4.8
47.00-47.99	1.8	1.0	1.7	0.9				0.1	5.7
48.00-48.99	1.8	1.4	1.9	1.0		1.1			6.6
49.00-49.99	2.3	1.7	1.7	1.0	1.5		0.1	0.1	8.8
50.00-51.99	7.8	6.0	4.5	3.3	2.1	1.0	0.1	0.1	24.8
52.00-53.99	10.0	7.5	4.7	3.9	2.0	1.4	0.1	0.1	29.8
54.00-55.99	11.7	10.6	7.9	4.2	3.6	1.7	0.2	0.1	40.1
56.00-57.99	14.5	12.6	10.8	4.6	3.3	1.7	0.1	0.2	47.9
58.00-59.99	18.0	14.1	8.8	6.6	3.7	1.9	0.2	0.3	53.6
60.00-64.99	52.9	40.3	21.9	17.2	9.9	5.4	0.4	1.2	149.1
65.00-69.99	53.5	44.0	23.6	19.5	12.9	6.0	0.5	1.2	161.2
70.00-74.99	62.1	47.6	24.1	17.6	13.4	5.9	0.6	1.2	172.6
75.00-79.99(d)	69.7	52.8	22.8	17.5	12.6	5.9	0.7	1.4	183.4
80.00-99.99	224.2	159.6	55.5	54.5	41.5	15.8	2.7	5.7	559.6
100.00-119.99	139.7	97.6	31.6	26.3	25.8	7.9	2.5	4.8	336.3
120.00 and over	171.6	121.5	39.9	27.5	38.2	10.3	4.7	11.5	425.3
Total	844.0	619.9	264.3	206.7	170.8	66.1	12.8	28.0	2,212.6

(a) Pay-period which included 12 May 1971. For definitions and explanatory notes, see pages 252-4. (b) Excludes rural industry, and private domestic service. (c) See second paragraph, page 254. (d) Includes managerial, etc. staff earning 'up to \$79.99'—see first paragraph, page 254.  
\* Less than 50 employees.

NUMBER OF MANAGERIAL, ETC. STAFF AND ALL OTHER FULL-TIME ADULT MALES  
TOTAL WEEKLY EARNINGS GROUPS, MAY 1971(a)  
ALL INDUSTRY GROUPS(b), AUSTRALIA

Total weekly earnings group (\$)	Private employees			Government employees			Total (private and government)		
	Number	Per-centage	Cumulative per-centage	Number	Per-centage	Cumulative per-centage	Number	Per-centage	Cumulative per-centage
Up to 43.99	'000	%	%	'000	%	%	'000	%	%
44.00-44.99	2.4	0.2	0.2	0.3	0.1	0.1	1.1	0.1	0.1
45.00-45.99				0.1	(d)	0.1	0.7	(d)	0.1
46.00-46.99	3.0	0.2	0.4	0.2	(d)	0.1	1.3	0.1	0.1
47.00-47.99	4.1	0.3	0.6	1.7	0.2	0.3	4.8	0.2	0.4
48.00-48.99	4.4	0.3	0.9	2.2	0.3	0.6	5.7	0.3	0.6
49.00-49.99	6.0	0.4	1.3	2.8	0.4	0.9	6.6	0.3	0.9
50.00-51.99	17.2	1.1	2.5	7.6	1.1	1.3	8.8	0.4	1.3
52.00-53.99	20.2	1.3	3.8	9.5	1.3	2.3	24.8	1.1	2.4
54.00-55.99	27.9	1.9	5.7	12.2	1.7	3.7	29.8	1.3	3.8
56.00-57.99	30.8	2.1	7.7	17.1	2.4	5.4	40.1	1.8	5.6
58.00-59.99	36.3	2.4	10.2	17.2	2.4	7.8	47.9	2.2	7.8
60.00-64.99	102.8	6.9	17.0	46.3	6.5	10.2	53.6	2.4	10.2
65.00-69.99	111.0	7.4	24.4	50.3	7.1	16.7	149.1	6.7	16.9
70.00-74.99	113.4	7.6	32.0	59.1	8.3	23.8	161.2	7.3	24.2
75.00-79.99(c)	131.7	8.8	40.7	51.7	7.3	32.1	172.6	7.8	32.0
80.00-99.99	388.8	25.9	66.6	170.8	24.0	39.4	183.4	8.3	40.3
100.00-119.99	228.6	15.2	81.9	107.7	15.1	63.3	559.6	25.3	65.6
120.00 and over	271.9	18.1	100.0	153.3	21.5	78.5	336.3	15.2	80.8
Total	1,500.6	100.0	..	712.0	100.0	100.0	425.3	19.2	100.0

(a) Pay-period which included 12 May 1971. For definitions and explanatory notes, see pages 252-4. (b) Excludes rural industry, and private domestic service. (c) Includes managerial, etc., staff earning 'up to \$79.99'—see first paragraph, page 254. (d) Less than 0.05 per cent.



**AVERAGE WEEKLY EARNINGS, FULL-TIME ADULT MALE EMPLOYEES, MAY 1971(a)**  
**ALL INDUSTRY GROUPS, (b) STATES: PRIVATE EMPLOYEES**  
 (\$)

State	Managerial, etc. staff (c)	All other full-time adult males			Total private
		Overtime	Ordinary time	Total	
New South Wales . . . . .	139.60	13.60	76.40	90.00	98.40
Victoria . . . . .	136.80	12.80	73.70	86.60	95.90
Queensland . . . . .	121.10	12.40	71.00	83.40	88.90
South Australia . . . . .	122.10	10.50	71.30	81.90	87.30
Western Australia . . . . .	128.90	19.80	74.20	94.00	99.50
Tasmania . . . . .	119.10	10.00	73.50	83.50	88.30
Northern Territory(d) . . . . .	139.40	24.90	89.20	114.10	117.90
Australian Capital Territory(d) . . . . .	133.00	15.10	83.30	98.40	103.80
<b>Australia . . . . .</b>	<b>134.40</b>	<b>13.40</b>	<b>74.40</b>	<b>87.80</b>	<b>95.50</b>

For footnotes, see table below.

**AVERAGE WEEKLY EARNINGS, FULL-TIME ADULT MALE EMPLOYEES, MAY 1971 (a)**  
**INDUSTRY GROUPS, AUSTRALIA: PRIVATE EMPLOYEES**  
 (\$)

Industry group	Managerial, etc. staff (c)	All other full-time adult males			Total private
		Overtime	Ordinary time	Total	
<b>Manufacturing—</b>					
Extracting, refining and founding of metals . . . . .	149.10	19.20	76.70	95.90	99.40
Engineering and metalworking . . . . .	130.90	16.60	72.10	88.70	94.60
Ships, vehicles, parts and accessories . . . . .	131.20	15.20	73.80	89.00	92.70
<i>Founding, engineering, vehicles,     etc. . . . .</i>	<i>132.70</i>	<i>16.70</i>	<i>73.40</i>	<i>90.10</i>	<i>95.00</i>
Textiles, clothing and footwear . . . . .	128.60	11.70	67.50	79.20	88.40
Food, drink and tobacco . . . . .	125.70	12.40	67.50	79.90	85.50
Paper, printing, bookbinding and photography . . . . .	138.90	11.20	81.30	92.50	98.50
Chemicals, dyes, explosives, paints, non-mineral oils . . . . .	141.90	12.00	76.10	88.10	99.30
Other . . . . .	126.60	13.90	69.50	83.40	89.00
<i>Manufacturing groups . . . . .</i>	<i>131.60</i>	<i>14.60</i>	<i>72.30</i>	<i>86.90</i>	<i>92.70</i>
<b>Non-manufacturing—</b>					
Mining and quarrying . . . . .	161.60	23.90	91.50	115.40	120.70
Electricity, gas, water and sanitary services . . . . .	146.30	10.40	75.80	86.20	90.60
Building and construction . . . . .	132.30	18.60	79.00	97.60	102.10
Transport, storage and communi- cation . . . . .	132.70	22.60	76.90	99.50	103.70
Finance and property . . . . .	161.40	3.20	87.30	90.40	114.30
Wholesale trade, primary produce dealing, etc. . . . .	134.20	7.30	73.80	81.00	91.50
Retail trade . . . . .	114.70	5.20	69.10	74.30	83.60
Public authority activities (n.e.i.) and community and business services . . . . .	145.70	4.70	78.50	83.20	107.50
Other industries(e) . . . . .	117.80	9.40	69.80	79.20	87.80
<i>Non-manufacturing groups . . . . .</i>	<i>136.30</i>	<i>12.00</i>	<i>76.90</i>	<i>88.90</i>	<i>98.60</i>
<b>All industry groups(b) . . . . .</b>	<b>134.40</b>	<b>13.40</b>	<b>74.40</b>	<b>87.80</b>	<b>95.50</b>

(a) Pay-period which includes 12 May 1971. For definitions and explanatory notes, see pages 252-4. (b) Excludes rural industry, and private domestic service. (c) See footnote (c), page 259. (d) See second paragraph, page 254. (e) Includes amusement, hotels, cafés, personal service, etc. and forestry, fishing and trapping.

**AVERAGE WEEKLY EARNINGS, FULL-TIME ADULT MALE EMPLOYEES, MAY 1971(a)**  
**ALL INDUSTRY GROUPS(b), STATES: GOVERNMENT EMPLOYEES**  
 (\$)

State	Managerial, etc. staff (c)	All other full-time adult males			Total government
		Overtime	Ordinary time	Total	
New South Wales . . . . .	180.20	7.80	84.40	92.20	99.90
Victoria . . . . .	183.00	5.60	88.60	94.20	102.80
Queensland . . . . .	154.80	5.20	78.30	83.60	89.30
South Australia . . . . .	167.20	5.60	80.20	85.90	92.50
Western Australia . . . . .	174.20	8.60	81.20	89.80	97.70
Tasmania . . . . .	161.80	5.30	81.10	86.40	93.90
Northern Territory(d) . . . . .	179.90	12.10	93.20	105.30	110.80
Australian Capital Territory(d) . . . . .	203.80	7.50	104.70	112.20	130.10
Australia . . . . .	176.90	6.70	84.40	91.00	98.90

For footnotes, see table below.

**AVERAGE WEEKLY EARNINGS, FULL-TIME ADULT MALE EMPLOYEES, MAY 1971(a)**  
**INDUSTRY GROUPS, AUSTRALIA: GOVERNMENT EMPLOYEES**  
 (\$)

Industry group	Managerial, etc. staff (c)	All other full-time adult males			Total government
		Overtime	Ordinary time	Total	
Manufacturing—					
Extracting, refining and founding of metals . . . . .	149.50	21.30	63.40	84.70	92.60
Engineering and metalworking . . . . .	176.70	5.60	73.40	79.00	80.30
Ships, vehicles, parts and accessories . . . . .	172.10	9.30	70.90	80.20	81.10
Founding, engineering, vehicles, etc. . . . .	170.30	8.80	71.30	80.00	81.10
Textiles, clothing and footwear . . . . .	171.40	1.90	75.40	77.30	79.60
Food, drink and tobacco . . . . .	129.70	13.00	66.70	79.70	81.50
Paper, printing, bookbinding and photography . . . . .	161.30	6.20	82.20	88.40	91.40
Chemicals, dyes, explosives, paints, non-mineral oils . . . . .	207.00	2.70	77.50	80.20	87.20
Other . . . . .	156.90	5.20	75.50	80.70	83.50
Manufacturing groups . . . . .	168.30	8.40	72.00	80.40	82.30
Non-manufacturing—					
Mining and quarrying . . . . .	190.70	16.70	99.90	116.70	121.40
Electricity, gas, water and sanitary services . . . . .	185.10	6.80	82.10	88.90	95.30
Building and construction . . . . .	159.40	8.40	69.90	78.30	81.20
Transport, storage and communication . . . . .	182.90	10.50	83.20	93.70	98.40
Finance and property . . . . .	163.10	1.80	92.10	93.90	107.30
Wholesale trade, primary produce dealing, etc. . . . .	168.60	19.20	68.90	88.10	92.10
Retail trade . . . . .	122.10	2.60	68.70	71.30	77.40
Public authority activities (n.e.i.) and community and business services . . . . .	179.00	3.20	96.30	99.50	111.90
Other industries(e) . . . . .	146.70	4.80	72.20	76.90	81.20
Non-manufacturing groups . . . . .	177.00	6.50	85.60	92.10	100.50
All industry groups(b) . . . . .	176.90	6.70	84.40	91.00	98.90

(a) Pay period which included 12 May 1971. For definitions and explanatory notes, see pages 252-4. (b) Excludes rural industry, and private domestic service. (c) See last paragraph on page 253 concerning differences between the reporting practices of private and government employers in the classification of managerial, etc., staff. (d) See second paragraph, page 254. (e) Includes amusement, hotels, cafés, personal service, etc., and forestry, fishing and trapping.

**AVERAGE WEEKLY EARNINGS, FULL-TIME ADULT MALE EMPLOYEES  
MAY 1971(a), ALL INDUSTRY GROUPS(b), STATES: TOTAL  
(PRIVATE AND GOVERNMENT) EMPLOYEES**  
(\\$)

State	Managerial, etc. staff (c)	All other full-time adult males			Total (private and government)
		Overtime	Ordinary time	Total	
New South Wales . . . . .	146.90	11.80	79.00	90.70	98.80
Victoria . . . . .	144.90	10.60	78.30	89.00	97.90
Queensland . . . . .	129.60	9.60	73.90	83.50	89.10
South Australia . . . . .	133.70	8.70	74.70	83.40	89.20
Western Australia . . . . .	139.70	15.80	76.70	92.50	98.90
Tasmania . . . . .	131.30	8.30	76.20	84.50	90.30
Northern Territory(d) . . . . .	153.00	18.20	91.30	109.50	114.30
Australian Capital Territory(d) . . . . .	186.90	9.70	98.50	108.20	122.70
<b>Australia . . . . .</b>	<b>143.20</b>	<b>11.10</b>	<b>77.80</b>	<b>88.90</b>	<b>96.60</b>

For footnotes see table below.

**AVERAGE WEEKLY EARNINGS, FULL-TIME ADULT MALE EMPLOYEES  
MAY 1971(a), INDUSTRY GROUPS, AUSTRALIA: TOTAL  
(PRIVATE AND GOVERNMENT) EMPLOYEES**  
(\\$)

Industry group	Managerial etc. staff (c)	All other full-time adult males			Total (private and government)
		Overtime	Ordinary time	Total	
<b>Manufacturing—</b>					
Extracting, refining and founding of metals . . . . .	149.10	19.20	76.60	95.90	99.40
Engineering and metalworking . . . . .	131.10	16.20	62.20	88.40	94.20
Ships, vehicles, parts and accessories . . . . .	132.90	13.50	73.00	86.50	89.60
<i>Founding, engineering, vehicles,       etc. . . . .</i>	<i>133.20</i>	<i>15.90</i>	<i>73.10</i>	<i>89.00</i>	<i>93.60</i>
Textiles, clothing and footwear . . . . .	128.60	11.60	67.60	79.20	88.30
Food, drink and tobacco . . . . .	125.80	12.40	67.40	79.90	85.30
Paper, printing, bookbinding and photography . . . . .	139.20	11.00	81.40	92.40	98.20
Chemicals, dyes, explosives, paints, non-mineral oils . . . . .	144.00	10.90	76.20	87.10	98.00
Other . . . . .	126.80	13.60	69.70	83.30	88.90
<i>Manufacturing groups . . . . .</i>	<i>132.10</i>	<i>14.10</i>	<i>72.30</i>	<i>86.40</i>	<i>91.90</i>
<b>Non-manufacturing—</b>					
Mining and quarrying . . . . .	162.80	23.40	92.10	115.50	120.80
Electricity, gas, water and sanitary services . . . . .	182.00	7.10	81.60	88.70	95.00
Building and construction . . . . .	137.40	13.60	74.60	88.20	92.40
Transport, storage and communica- tion . . . . .	155.20	14.40	81.20	95.50	100.20
Finance and property . . . . .	161.70	2.70	88.80	91.50	112.50
Wholesale trade, primary produce dealing, etc. . . . .	134.30	7.40	73.70	81.10	91.50
Retail trade . . . . .	114.70	5.20	69.10	74.30	83.60
Public authority activities (n.e.i.) and community and business services . . . . .	167.50	3.40	93.90	97.40	111.10
Other industries(e) . . . . .	120.60	7.90	70.50	78.50	85.90
<i>Non-manufacturing groups . . . . .</i>	<i>148.60</i>	<i>9.20</i>	<i>81.30</i>	<i>90.50</i>	<i>99.50</i>
<b>All industry groups(b) . . . . .</b>	<b>143.20</b>	<b>11.10</b>	<b>77.80</b>	<b>88.90</b>	<b>96.60</b>

(a) Pay-period which included 12 May 1971. For definitions and explanatory notes, see pages 252-4. (b) Excludes rural industry and private domestic service. (c) See last paragraph on page 253 concerning differences between the reporting practices of private and government employers in the classification of managerial, etc., staff. (d) See second paragraph, page 254. (e) Includes amusement, hotels, cafés, personal service etc. and forestry, fishing and trapping.



## Surveys of weekly earnings and hours, October 1962 to October 1971

Sample surveys in respect of most private employers subject to pay-roll tax (i.e. those paying more than \$400 per week in wages and salaries) have been conducted as at the last pay-period in October during recent years. Some results of the 1971 survey and comparisons with earlier such surveys are contained in the following tables. Further particulars including averages for each State are published in the annual bulletin, *Survey of Weekly Earnings and Hours* (6.1). Preliminary results of these surveys are published in the bulletin *Surveys of Weekly Earnings and Hours* (Preliminary Results) (6.28) as soon as returns from a large percentage of respondents have been processed.

In addition to obtaining data for the calculation of average weekly earnings, average weekly hours paid for, and average hourly earnings, information on overtime and ordinary time earnings and hours for full-time employees (other than managerial, etc. staff) was obtained from surveys beginning with the October 1966 survey. The figures of average overtime earnings and average overtime hours are the averages for *all* employees (in the specified category) represented in the survey whether or not they worked overtime. The survey figures do not show the average overtime earnings or hours of only those employees who worked overtime.

Figures of average weekly earnings, average weekly hours paid for, and average hourly earnings as at the selected pay-periods are presented for males and females (adult and junior) separately by industry groups and by States. They reflect the effects of differences (and of changes between points of time) in amounts paid for the various occupations; in amounts paid for the same occupations; in occupational structures within industries; in industry structure; in degrees of business activity (incidence of overtime, etc.); and in the incidence of incentive schemes, piecework and profit-sharing scheme payments, etc.

### Scope of survey

The results of the surveys are based on returns from stratified random samples of private employers subject to pay-roll tax. Employees in rural industry and in private domestic service are excluded because most employers in these two industries are not subject to pay-roll tax. Also excluded from the surveys are: employees of government and semi-government authorities; employees of religious, benevolent and other similar organisations exempt from pay-roll tax; and all employees in the Northern Territory and the Australian Capital Territory. The earnings and hours of waterside workers employed on a casual basis are excluded because they are subject to wide fluctuations for short periods such as those covered by these surveys. Waterside workers on weekly hire employed under the new permanent employment scheme are included in the surveys.

Approximately 5,100 employers were included in the October 1971 survey and the sample represented 1,788,000 male and 829,000 female wage and salary earners.

As the survey was based on a sample, the resultant estimates are subject to sampling variability, that is, variations which might occur by chance because only a sample of employers was surveyed. The extent of the detail published has been determined after considering estimated measures of sampling variability.

### Comparability of results

In addition to affecting the results of each sample survey, sampling variability also affects comparison between each year's results.

The industry classification adopted for these earnings and hours surveys from 1963 onwards (including the 1965 survey) is that used for the 1961 and 1966 population censuses.

The October 1965 Survey of Weekly Earnings was a special purpose survey on a different basis from the surveys compared in this section and, therefore, its results are not shown herein (see page 252).

The allocation of employees between 'Managerial, executive, professional and higher supervisory staff' and 'All other full-time employees' (as defined) depends upon the employers' interpretation of the definitions (see page 262).

**Definitions**

The following definitions refer to terms used in the surveys and in the tables in this section.

*Employees* refers to male and female employees on the pay-roll and who received pay for the last pay-period in October.

*Adults* includes all employees 21 years of age and over and those employees who, although under 21 years of age, are paid at the adult rate for their occupation.

*Juniors* refers to those employees under 21 years of age who are not paid at the adult rate for their occupation.

*Full-time employees* refers to those employees who ordinarily work 30 hours or more a week and who received pay for the last pay-period in October. Included are 'full-time' employees on short-time; 'full-time' employees who began or ceased work during the pay-period; and 'full-time' employees on paid annual leave, paid sick leave, long service leave and paid holidays taken during the pay-period.

*Part-time employees* refers to employees who ordinarily work less than 30 hours a week and who received pay for the last pay-period in October. Employees on short-time who normally work 30 hours or more a week are classified as full-time employees.

*Other than managerial, etc. staff* includes minor supervisory employees, leading hands, clerical and office staff as well as ordinary wages employees. It excludes *managerial, executive, professional and higher supervisory staff* who were not further defined.

*Weekly earnings* refers to gross earnings for the last pay-period in October before taxation and other deductions have been made. It includes ordinary time earnings, overtime earnings, shift allowances, penalty rates, commission and similar payments; and that part of paid annual leave, paid sick leave, long service leave and paid holidays taken during the pay-period. It includes one week's proportion of payments made other than on a weekly basis, e.g. salary paid fortnightly or monthly; paid annual or other leave taken during the pay-period; periodical payments under incentive, piecework, profit sharing schemes, etc.; commissions; annual or periodical bonuses, etc. Retrospective payments are excluded.

*Overtime earnings* refers to that part of gross weekly earnings (as defined above) for hours paid for in excess of award, standard or agreed hours of work. Overtime earnings were not reported for *managerial, etc. staff*.

*Ordinary time earnings* refers to that part of gross weekly earnings (as defined above) for award, standard or agreed hours of work. It includes shift allowances, penalty rates, commissions, bonuses and incentive payments, and that part of paid annual and other leave, which relates to these hours.

*Weekly man-hours paid for* refers to the sum of man-hours for which payment was made. It includes ordinary time hours, overtime hours, paid stand-by or reporting time; and that part of paid annual leave, paid sick leave, long service leave and paid holidays taken during the specified pay-period. For employees paid other than weekly, hours are converted to a weekly basis. For employees who began or ceased work, or were absent without pay for any reason during the specified week, only the man-hours actually paid for are included. Where agreed hours of work are less than award hours, man-hours are based on agreed hours. Hours of work were not reported for *managerial, etc. staff*.

*Overtime hours* refers to hours in excess of award, standard or agreed hours of work.

*Ordinary time hours* refers to award, standard or agreed hours of work. It includes man-hours of stand-by or reporting time which are part of standard hours of work, and that part of paid annual leave, paid sick leave and long service leave taken during the specified week.

**AVERAGE WEEKLY EARNINGS AND HOURS (OVERTIME AND ORDINARY TIME)(a), FULL-TIME EMPLOYEES (OTHER THAN MANAGERIAL, ETC. STAFF)(b): INDUSTRY GROUPS AUSTRALIA(c), OCTOBER 1971(d)**

Industry group	Average weekly earnings (\$)			Average weekly hours paid for			Average weekly earnings (\$)			Average weekly hours paid for		
	Over-time earnings	Ordinary time earnings	Total	Over-time hours	Ordinary time hours	Total	Over-time earnings	Ordinary time earnings	Total	Over-time hours	Ordinary time hours	Total
ADULT MALES						JUNIOR MALES						
Manufacturing—												
Extracting, refining and founding of metals . . .	14.20	78.30	92.50	5.0	38.8	43.8	3.40	44.30	47.80	2.0	38.3	40.3
Engineering and metal-working . . .	16.10	75.20	91.30	5.5	38.5	44.1	4.70	38.30	43.00	2.7	38.7	41.4
Ships, vehicles, parts and accessories . . .	13.40	75.90	89.30	4.5	38.1	42.6	3.20	38.60	41.80	2.1	38.7	40.8
Founding, engineering, vehicles, etc. . .	15.10	75.90	91.00	5.2	38.5	43.7	4.10	39.40	43.50	2.4	38.6	41.1
Textiles, clothing and footwear . . .	12.90	69.30	82.10	5.1	38.6	43.7	4.30	37.50	41.70	2.7	38.2	40.8
Food, drink and tobacco . . .	14.00	69.70	83.70	5.2	38.4	43.6	4.70	37.70	42.40	2.8	37.9	40.7
Paper, printing, book-binding and photography . . .	11.00	83.30	94.20	3.6	38.7	42.3	3.40	43.60	47.00	1.9	39.2	41.1
Chemicals, dyes, explosives, paints, non-mineral oils . . .	11.90	80.20	92.10	4.0	38.6	42.5	3.40	43.80	47.20	1.8	38.7	40.5
Other . . .	14.20	72.30	86.40	5.2	38.6	43.8	3.30	36.10	39.40	2.2	38.0	40.1
Manufacturing groups . . .	14.20	74.70	88.90	5.0	38.5	43.5	3.90	39.10	43.00	2.4	38.5	40.8
Non-manufacturing—												
Mining and quarrying . . .	22.50	95.60	118.10	7.4	36.6	44.0	8.00	53.50	61.60	4.2	37.4	41.6
Building and construction . . .	22.40	80.50	102.90	7.0	38.6	45.6	3.70	44.60	48.30	2.1	39.5	41.6
Transport and storage . . .	18.30	77.80	96.10	6.2	38.6	44.9	4.60	44.60	49.20	2.6	38.8	41.4
Finance and property . . .	2.70	86.60	89.40	0.8	38.0	38.9	0.80	46.20	47.10	0.4	38.6	39.0
Wholesale trade, primary produce dealing, etc. . .	7.90	73.70	81.60	2.9	38.8	41.7	2.60	37.30	39.90	1.7	38.6	40.2
Retail trade . . .	5.80	70.30	76.20	2.2	39.3	41.4	2.40	35.40	37.70	1.7	39.1	40.8
Other industries(e) . . .	8.50	76.70	85.30	3.2	38.8	42.0	2.50	42.80	45.30	1.5	38.1	39.7
Non-manufacturing groups . . .	12.50	78.10	90.50	4.2	38.6	42.8	2.60	40.70	43.20	1.6	38.8	40.4
All industry groups(f) . . .	13.40	76.20	89.60	4.6	38.5	43.2	3.20	39.90	43.10	2.0	38.7	40.6
ADULT FEMALES						JUNIOR FEMALES						
Manufacturing groups . . .	3.40	49.50	53.00	1.8	37.8	39.6	1.20	32.80	34.10	1.0	38.1	39.0
Non-manufacturing groups . . .	1.60	54.50	56.10	0.8	38.1	38.9	0.70	35.20	35.90	0.5	38.5	39.0
All industry groups(f) . . .	2.60	51.90	54.40	1.3	38.0	39.3	0.80	34.60	35.40	0.6	38.4	39.0

(a) Average weekly overtime and ordinary time earnings and hours are averages for all employees represented in the survey see page 261. (b) Private employees only. Excludes managerial, executive, professional and higher supervisory staff. (c) Excludes Northern Territory and Australian Capital Territory. (d) Last pay-period in October. For definitions and particulars of scope of the survey, etc., see pages 261-2. (e) Includes community and business services; amusement, hotels, cafés, personal service, etc.; electricity, gas, water supply and sanitary services; and forestry, fishing and trapping. (f) Excludes rural industry, and private domestic service.



**AVERAGE WEEKLY EARNINGS, FULL-TIME EMPLOYEES (OTHER THAN MANAGERIAL ETC. STAFF)(a): INDUSTRY GROUPS, AUSTRALIA(b), OCTOBER 1969, 1970 AND 1971(c)**

(\$)

Industry group	Adult males			Junior males			Adult females			Junior females		
	Oct. 1969	Oct. 1970	Oct. 1971	Oct. 1969	Oct. 1970	Oct. 1971	Oct. 1969	Oct. 1970	Oct. 1971	Oct. 1969	Oct. 1970	Oct. 1971
<b>Manufacturing—</b>												
Extracting, refining and founding of metals . . .	79.20	84.90	92.50	38.90	45.90	47.80	45.60	50.40	59.20	32.80	35.60	40.20
Engineering and metalworking . . .	75.10	79.50	91.30	36.00	38.40	43.00	42.00	48.30	57.40	29.40	32.20	38.30
Ships, vehicles, parts and accessories . .	71.90	78.10	89.30	35.30	36.40	41.80	42.40	48.60	58.10	30.20	32.10	38.60
<i>Founding, engineering, vehicles, etc. . . . .</i>	<i>74.90</i>	<i>80.10</i>	<i>91.00</i>	<i>36.30</i>	<i>39.10</i>	<i>43.50</i>	<i>42.30</i>	<i>48.40</i>	<i>57.60</i>	<i>29.90</i>	<i>32.50</i>	<i>38.60</i>
Textiles, clothing and footwear . . .	68.30	73.40	82.10	33.50	36.30	41.70	40.50	42.60	49.40	23.80	26.20	30.80
Food, drink and tobacco . . .	68.50	73.80	83.70	34.60	37.30	42.40	40.40	43.90	51.20	27.20	29.10	34.10
Paper, printing, book-binding and photography . .	79.60	86.00	94.20	37.80	41.30	47.00	41.90	46.40	52.90	28.20	29.80	33.70
Chemicals, dyes, explosives, paints, non-mineral oils . .	73.90	79.90	92.10	38.40	40.60	47.20	42.70	47.20	55.60	31.00	31.70	38.80
Other . . .	71.70	77.00	86.40	35.30	35.80	39.40	40.70	44.90	52.10	28.50	29.30	33.40
<i>Manufacturing groups . . .</i>	<i>73.30</i>	<i>78.70</i>	<i>88.90</i>	<i>36.00</i>	<i>38.50</i>	<i>43.00</i>	<i>41.20</i>	<i>45.20</i>	<i>53.00</i>	<i>27.00</i>	<i>29.20</i>	<i>34.10</i>
<b>Non-manufacturing—</b>												
Mining and quarrying . . .	95.50	104.00	118.10	52.30	53.00	61.60	54.70	58.90	65.90	36.40	37.80	43.60
Building and construction . . .	80.20	90.40	102.90	36.50	41.60	48.30	46.90	52.50	59.30	32.40	32.70	37.10
Transport and storage . . .	81.60	90.00	96.10	39.30	43.30	49.20	48.80	55.10	61.60	33.30	33.70	37.90
Finance and property . . .	79.80	83.60	89.40	39.70	43.10	47.10	49.90	54.30	60.10	33.50	37.20	39.80
Wholesale trade, primary produce dealing, etc. . . . .	68.90	74.20	81.60	34.40	37.00	39.90	45.90	49.90	55.80	30.00	31.60	36.10
Retail trade . . .	62.90	66.80	76.20	32.20	34.70	37.70	43.10	45.80	51.90	26.10	28.50	32.10
Other industries(d) . . .	71.00	77.00	85.30	36.50	40.30	45.30	45.10	50.30	57.40	29.40	32.90	37.20
<i>Non-manufacturing groups . . .</i>	<i>74.90</i>	<i>81.60</i>	<i>90.50</i>	<i>35.70</i>	<i>38.90</i>	<i>43.20</i>	<i>45.50</i>	<i>49.70</i>	<i>56.10</i>	<i>29.40</i>	<i>32.20</i>	<i>35.90</i>
All industry groups(e) . . .	74.00	80.00	89.60	35.80	38.70	43.10	43.20	47.30	54.40	28.60	31.30	35.40

(a) Private employees only. Excludes managerial, executive, professional and higher supervisory staff. (b) Excludes Northern Territory and Australian Capital Territory. (c) Last pay-period in October. For definitions, particulars of scope of the surveys, etc., see pages 261-2. (d) Includes community and business services; amusement, hotels, cafés, personal service, etc.; electricity, gas, water and sanitary services; and forestry, fishing and trapping. (e) Excludes rural industry, and private domestic service.

**AVERAGE WEEKLY HOURS PAID FOR, FULL-TIME EMPLOYEES (OTHER THAN  
MANAGERIAL, ETC. STAFF)(a): INDUSTRY GROUPS, AUSTRALIA(b)  
OCTOBER 1969, 1970 AND 1971(c)**

Industry group	Adult males			Junior males			Adult females			Junior females		
	Oct. 1969	Oct. 1970	Oct. 1971	Oct. 1969	Oct. 1970	Oct. 1971	Oct. 1969	Oct. 1970	Oct. 1971	Oct. 1969	Oct. 1970	Oct. 1971
<b>Manufacturing—</b>												
Extracting, refining and founding of metals . . . . .	45.5	45.0	43.8	41.7	42.2	40.3	40.6	40.5	39.7	40.2	40.3	39.7
Engineering and metal-working . . . . .	44.7	44.8	44.1	41.3	41.3	41.4	40.3	40.5	40.2	38.9	39.3	39.5
Ships, vehicles, parts and accessories . . . . .	43.2	43.0	42.6	41.0	41.4	40.8	39.8	39.5	39.9	39.5	39.4	39.7
Founding, engineering, vehicles, etc. . . . .	44.5	44.4	43.7	41.3	41.5	41.1	40.2	40.3	40.1	39.2	39.4	39.6
Textiles, clothing and footwear . . . . .	43.8	43.6	43.7	41.1	40.4	40.8	39.7	39.5	39.2	38.8	39.5	38.8
Food, drink and tobacco . . . . .	43.7	43.6	43.6	40.8	40.7	40.7	39.6	39.1	39.3	39.1	38.9	38.8
Paper, printing, book-binding and photography . . . . .	42.7	42.7	42.3	41.3	41.2	41.1	39.4	39.5	39.6	39.6	39.5	39.3
Chemicals, dyes, explosives, paints, non-mineral oils . . . . .	43.0	42.9	42.5	40.7	40.6	40.5	39.3	39.6	39.2	38.7	38.6	39.0
Other . . . . .	44.3	44.2	43.8	41.6	40.4	40.1	39.8	39.8	39.8	39.2	38.8	38.8
<b>Manufacturing groups</b> . . . . .	44.1	44.0	43.5	41.3	41.1	40.8	39.8	39.7	39.6	39.1	39.3	39.0
<b>Non-manufacturing—</b>												
Mining and quarrying . . . . .	44.8	44.8	44.0	42.2	42.2	41.6	39.0	38.9	39.0	39.3	38.5	38.6
Building and construction . . . . .	44.6	44.8	45.6	40.8	41.8	41.6	39.1	39.4	39.3	39.6	39.6	39.4
Transport and storage . . . . .	46.6	46.1	44.9	42.3	42.1	41.4	39.4	39.3	39.4	38.9	39.4	39.3
Finance and property . . . . .	38.6	38.5	38.9	38.7	39.0	39.0	38.0	37.9	37.8	38.1	38.4	38.5
Wholesale trade, primary produce dealing, etc. . . . .	41.7	41.9	41.7	40.6	40.4	40.2	38.8	38.7	38.7	38.9	38.8	38.8
Retail trade . . . . .	41.6	41.8	41.4	41.4	41.1	40.8	39.5	39.3	39.5	39.8	39.7	39.8
Other industries(d) . . . . .	42.2	42.2	42.0	39.5	39.6	39.7	39.0	39.1	38.9	38.1	37.8	38.0
<b>Non-manufacturing groups</b> . . . . .	42.9	43.0	42.8	40.5	40.6	40.4	39.0	38.9	38.9	39.0	38.9	39.0
<b>All industry groups(e)</b> . . . . .	43.6	43.5	43.2	40.9	40.8	40.6	39.4	39.4	39.3	39.0	39.0	39.0

(a) Private employees only. Excludes managerial, executive, professional and higher supervisory staff. (b) Excludes Northern Territory and Australian Capital Territory. (c) Last pay-period in October. For definitions, particulars of scope of the surveys, etc., see pages 261-2. (d) Includes community and business services; amusement, hotels, cafés, personal service, etc.; electricity, gas, water and sanitary services; and forestry, fishing and trapping. (e) Excludes rural industry, and private domestic service.

In the following table the average weekly earnings, average weekly hours paid for, and average hourly earnings at the last pay-period in October for the years 1968 to 1971 are shown for full-time males and females (adult and junior).

**AVERAGE EARNINGS AND HOURS FOR FULL TIME EMPLOYEES (OTHER THAN  
MANAGERIAL, ETC. STAFF)(a): ALL INDUSTRY GROUPS, AUSTRALIA(b)  
OCTOBER 1968 TO 1971(c)**

	Average weekly earnings (\$)				Average weekly hours paid for				Average hourly earnings (\$)			
	Oct. 1968	Oct. 1969	Oct. 1970	Oct. 1971	Oct. 1968	Oct. 1969	Oct. 1970	Oct. 1971	Oct. 1968	Oct. 1969	Oct. 1970	Oct. 1971
Adult males . . . . .	69.00	74.00	80.00	89.60	43.3	43.6	43.5	43.2	1.59	1.70	1.84	2.08
Junior males . . . . .	33.80	35.80	38.70	43.10	40.9	40.9	40.8	40.6	0.83	0.88	0.95	1.06
Adult females . . . . .	39.30	43.20	47.30	54.40	39.1	39.4	39.4	39.3	1.00	1.10	1.20	1.39
Junior females . . . . .	25.60	28.60	31.30	35.40	39.0	39.0	39.0	39.0	0.66	0.73	0.80	0.91

(a) Private employees only. Excludes managerial, executive, professional, and higher supervisory staff. (b) Excludes Northern Territory and Australian Capital Territory. (c) Last pay-period in October. For definitions, particulars of scope of the surveys, etc., see pages 261-2.

**AVERAGE WEEKLY EARNINGS, FULL-TIME MALE MANAGERIAL, EXECUTIVE, ETC.  
STAFF(a): INDUSTRY GROUPS, AUSTRALIA(b), OCTOBER 1968 TO OCTOBER 1971(c)**

(\$)

<i>Industry group</i>	<i>October 1968</i>	<i>October 1969</i>	<i>October 1970</i>	<i>October 1971</i>
<b>Manufacturing—</b>				
Extracting, refining and founding of metals . . . . .	129.40	135.10	148.50	157.50
Engineering and metalworking . . . . .	111.20	118.30	127.70	141.30
Ships, vehicles, parts and accessories . . . . .	109.90	117.00	124.30	137.70
<i>Founding, engineering, vehicles, etc.</i> . . . .	112.60	119.40	129.00	142.10
Textiles, clothing and footwear . . . . .	103.20	114.80	120.80	136.50
Food, drink and tobacco . . . . .	103.40	112.40	123.90	138.70
Paper, printing, bookbinding and photography . . . . .	111.40	117.90	127.80	142.70
Chemicals, dyes, explosives, paints, non-mineral oils . . . . .	119.90	126.80	133.40	153.00
Other . . . . .	106.60	112.70	128.00	136.50
<i>Manufacturing groups</i> . . . . .	109.80	117.20	127.60	141.00
<b>Non-manufacturing—</b>				
Mining and quarrying . . . . .	137.50	147.40	161.90	177.00
Building and construction . . . . .	105.30	117.10	130.50	140.40
Transport and storage . . . . .	109.80	116.20	124.50	137.00
Finance and property . . . . .	118.00	130.30	156.80	154.30
Wholesale trade, primary produce dealing, etc. . . . .	110.00	118.40	125.60	136.70
Retail trade . . . . .	88.10	97.00	105.70	114.10
Other industries(d) . . . . .	107.50	114.80	124.80	134.00
<i>Non-manufacturing groups</i> . . . . .	106.70	116.60	129.40	136.90
All industry groups(e) . . . . .	108.10	116.90	128.70	138.50

(a) Private employees only. Includes managerial, executive, professional and higher supervisory staff. For definitions, particulars of scope of the surveys, etc., see pages 261-2. (b) Excludes Northern Territory and Australian Capital Territory. (c) Last pay-period in October. (d) Includes community and business services; amusement, hotels, cafés, personal service, etc.; electricity, gas, water and sanitary services; and forestry, fishing and trapping. (e) Excludes rural industry, and private domestic service.

**AVERAGE WEEKLY EARNINGS, FULL-TIME FEMALE MANAGERIAL  
EXECUTIVE, ETC. STAFF(a): INDUSTRY GROUPS, AUSTRALIA(b)  
OCTOBER 1968 TO 1971**

(\$)

<i>Survey</i>	<i>Manufacturing groups</i>	<i>Non- manufacturing groups</i>	<i>All industry groups(e)</i>
<b>October(c)—</b>			
1968 . . . . .	60.60	63.50	62.50
1969 . . . . .	64.90	68.00	67.10
1970 . . . . .	72.70	71.30	71.70
1971 . . . . .	80.60	81.20	81.10

For footnotes see table above.

**AVERAGE EARNINGS AND HOURS, PART-TIME EMPLOYEES(a)  
AUSTRALIA(b), OCTOBER 1968 TO 1971(c)**

<i>Survey</i>	<i>Average weekly earnings (\$)</i>				<i>Average weekly hours paid for</i>				<i>Average hourly earnings (\$)</i>			
	<i>Adult males</i>	<i>Junior males</i>	<i>Adult females</i>	<i>Junior females</i>	<i>Adult males</i>	<i>Junior males</i>	<i>Adult females</i>	<i>Junior females</i>	<i>Adult males</i>	<i>Junior males</i>	<i>Adult females</i>	<i>Junior females</i>
<b>October(c)—</b>												
1968 . . . . .	21.30	4.50	20.00	5.00	14.1	5.8	17.3	7.4	1.51	0.78	1.16	0.67
1969 . . . . .	23.40	5.70	21.70	7.00	14.1	7.1	17.6	9.4	1.66	0.81	1.23	0.74
1970 . . . . .	26.60	6.10	22.90	6.00	14.8	7.1	17.4	6.9	1.80	0.85	1.32	0.86
1971 . . . . .	28.60	6.50	26.40	7.00	14.8	6.9	17.5	7.4	1.94	0.94	1.51	0.94

(a) Private employees only. Part-time employees are those who normally work less than 30 hours a week. For definitions, particulars of scope of the surveys, etc., see pages 261-2. (b) Excludes Northern Territory and Australian Capital Territory. (c) Last pay-period in October.



## Determination of wage rates in Australia

Before June 1967, the concept of a basic or living wage was common to wage rates determined by industrial authorities in Australia. Initially, the concept of a basic wage (for adult males) was interpreted as the wage necessary to maintain an average employee and his family in a reasonable state of comfort. However, it was later generally accepted that the basic wage should be fixed at the highest amount which the economy could sustain and that the dominant factor was the capacity of the community to carry the resultant wage levels. Basic wages were determined for adult females as well as for adult males.

In addition to the basic wage, secondary wage payments, including margins for skill, etc., and various kinds of loadings peculiar to the occupation or industry, were determined by industrial authorities. The basic wage and the secondary wage made up the minimum wage rate for a particular occupation.

In the following paragraphs is set out a brief history of the determination of wage rates in Australia by Commonwealth and State industrial authorities. For more detailed information including the history of basic wage determination in Australia see previous issues of the Year Book and the annual *Labour Report*.

### Commonwealth Basic Wages and Margins

For a brief history of Commonwealth basic wages and margins, see earlier issues of the Year Book and the *Labour Report*. As a result of a decision of the Commonwealth Conciliation and Arbitration Commission in the National Wage Cases of 1967, basic wages and margins were eliminated from Commonwealth awards and total wages were introduced to operate from the beginning of the first pay-period to commence on or after 1 July 1967.

For tables showing Commonwealth basic wage rates for adult males and adult females see the Appendix to *Labour Report* No. 55, 1970.

### Commonwealth total wages

In the national wage cases of 1964 and 1965 applications by employers that basic wages and margins should be deleted from Commonwealth awards and total wages introduced were rejected by the Commonwealth Conciliation and Arbitration Commission. However, in its decisions in the Basic Wage, Margins and Total Wage Cases of 1966 the Commission decided to defer the conversion of the wage structure to the basis of a single wage pending further consideration of the present structure of marginal rates and further argument. As a result of the National Wage Cases of 1967, in which the employers again applied for a total wage, the Commonwealth Conciliation and Arbitration Commission announced the elimination of basic wages and margins from Commonwealth awards and the introduction of total wages. The total wages were arrived at by adding an amount of \$1 a week to the weekly award wages for each adult male and adult female classification to operate from the beginning of the first pay-period to commence on or after 1 July 1967.

Trade unions unsuccessfully challenged in the High Court the abolition of basic wages and the adoption of total wages by the Commonwealth Commission.

As a result of its decision in the Basic Wage, Margins and Total Wage Cases of 1966, the Commonwealth Conciliation and Arbitration Commission, over the period September 1966 and November 1967, undertook a work value inquiry concerning classifications appearing in the Metal Trades Award. On 11 December 1967 the Commission issued a majority decision (Gallagher J. and Commissioner Winter, with Moore J. dissenting), granting increases to adult male classifications. Subsequently the Commission decided that these increases would operate in two stages, namely, from January 1968 and August 1968.

In its decisions in National Wage Cases, the Commonwealth Conciliation and Arbitration Commission increased total award rates of pay for adult male and female employees by \$1.35 a week in October 1968, by 3 per cent in December 1969 and by 6 per cent in January 1971. Increases were also made to the minimum wage for adult males (see below).

### Commonwealth minimum wage

In July 1966 the Commonwealth Conciliation and Arbitration Commission, in its decisions in the Basic Wage, Margins and Total Wage Cases of 1966, inserted in Commonwealth awards provisions for a minimum wage for adult males. The Commission said that it had given detailed consideration to lower paid classifications in the Metal Trades Award and had decided to grant some immediate relief to low wage earners. The Commission in its judgment said that it intended to insert

a new provision in awards by which it would be prescribed that no adult male employee should be paid as a weekly wage for working the standard hours of work an amount less than the minimum wage, i.e. his appropriate basic wage rate plus \$3.75 a week. The minimum wage was prescribed for adult male employees only and was applied for all purposes of the award, for example, in calculation of overtime and other penalty rates, piece-work, casual employment, sick leave and annual leave. The Commission stated that the provision for a minimum wage for adult male employees was designed to meet the circumstances of employees in the lowest classifications who were in receipt of award rates and no more. It was not intended to affect the wage of any employee who was already receiving the prescribed minimum through over-award payment. The provision for a minimum wage for adult males operated from the beginning of the first pay-period to commence on or after 11 July 1966. The rates of minimum wage for adult males inserted in Commonwealth awards ranged from \$34.75 to \$37.25 a week for State capital cities. As a result of the decisions of the Commission in the National Wage Cases, the minimum wages for adult males were increased by \$1 a week in July 1967, by \$1.35 a week in October 1968, by \$3.50 a week in December 1969 and by \$4.00 a week in January 1971.

### Equal pay

Two benches of the Commonwealth Conciliation and Arbitration Commission sat jointly from 25 February 1969 to 22 May 1969 to take evidence and hear argument on trade union claims for equal pay between the sexes in the Equal Pay Cases 1969.

Both benches of the Commission reached a common conclusion and on 19 June 1969 published their decision and reasons for their decision. The Commission said it was prepared to implement the principle of equal pay for equal work by introducing into Commonwealth awards and determinations the principles contained in State acts on equal pay. The Commission stated that no increases should be granted to adult females without an examination of the work done. It also suggested a number of principles to be applied in deciding applications for equal pay. In summary these were: (i) the work considered should be restricted to that performed by both adult males and adult females under terms of the same determination or award; (ii) the work should be the same or of a like nature and of equal value (from the point of view of wage or salary assessment), and to be of the same range and volume and performed under the same conditions; (iii) consideration should be restricted to the general work situation under the determination or award and not to that of one establishment; and (iv) equal pay should not be provided where the work is essentially or usually performed by females but upon which male employees may also be employed.

The Commission decided that implementation of equal pay should be spread over a period so that as from 1 January 1970 implementation would be the same as that under South Australian, Western Australian and Tasmanian Acts. Where a decision was reached prior to 1 October 1969 the female rate would become 85 per cent of the male rate from the beginning of the first pay-period to commence on or after 1 October 1969, increase to 90 per cent of the male rate from the beginning of the first pay-period to commence on or after 1 January 1970, increase to 95 per cent of the male rate from the beginning of the first pay-period to commence on or after 1 January 1971, and become equal to the male rate from the beginning of the first pay-period to commence on or after 1 January 1972. Where a decision was reached on or after 1 October 1969 it should not operate retrospectively. For decisions reached between 1 October 1969 and up to 1 January 1970, 85 per cent of the male rate at the date of operation should apply, and so on according to the above scale. No female rates should be reduced by operation of these formulae.

For details of equal pay provisions under State awards, etc., see *Labour Report* No. 55, 1970, pages 193-5.

## Determination of wage rates in State awards, etc.

### New South Wales

The first determination of a standard living wage for adult male employees under New South Wales State awards operated from 16 February 1914, when the Court of Arbitration fixed the rate at \$4.80 a week for the metropolitan area. The first living wage for adult females (\$3.00 a week) was declared by the Board of Trade to operate from 17 December 1918.

Legislation operative from 1 January 1968 determined the basic wage for adult males at \$34.50 a week and the basic wage for adult females at \$26.10 a week. The legislation also provided for the adjustment of wage rates in State awards by the Industrial Commission subsequent to a decision of the Commonwealth Conciliation and Arbitration Commission to vary Commonwealth wage rates wholly or partly on economic grounds. Changes in the State basic wage for adult males shall

not be more than the amount of increase in Commonwealth minimum wages for adult males, and the increase in the adult female basic wage not less than 75 per cent of the increase in the male basic wage. The Industrial Commission and Conciliation Committees were given power to include provisions for minimum wages for adult males or adult females in State awards.

Subsequent to decisions of the Commonwealth Conciliation and Arbitration Commission in National Wage Cases, the Industrial Commission of New South Wales increased the basic wages for adult males and adult females by \$1.35 a week in October 1968; the adult male basic wage by \$1.05 a week and the adult female basic wage by 85 cents a week in December 1969; and the basic wage for adult males by \$2.20 a week and the basic wage for adult females by \$1.70 a week from 1 January 1971. Marginal rates of pay in State awards were increased by 3 per cent in December 1969 and by 6 per cent in January 1971.

Further information on New South Wales basic wages is published in the annual *Labour Report*. State basic wage rates for Sydney are published in the Appendix to *Labour Report* No. 55, 1970.

### Victoria

In Victoria, Wages Boards are constituted for industry groups or occupations from representatives of employers and employees with an independent chairman to determine rates of wages and conditions of work.

Subsequent to the decisions of the Commonwealth Conciliation and Arbitration Commission in the National Wage Cases of 1967 (see page 267), the Industrial Appeals Court decided that basic wages and margins for adult males and adult females should be deleted from Wages Board determinations and that wage rates expressed as total wages should operate from the beginning of the first pay-period in July 1967. At the same time total wages for both adult males and adult females were increased by \$1 a week.

Following decisions of the Commonwealth Conciliation and Arbitration Commission in National Wage Cases, total wages prescribed for both adult males and adult females in Wages Board determinations were increased by \$1.35 in October 1968, by 3 per cent in December 1969 and by 6 per cent in January 1971. In December 1969 the Industrial Appeals Court ordered that a minimum wage for adult males of \$42.30 a week should operate in all determinations. In January 1971 the minimum wage for adult males was increased by \$4 a week.

For further information on the operation of Victorian Wages Board determinations see the annual *Labour Report*. Basic wage rates, general increases in total rates of pay, and rates of minimum wage for adult males are published in the Appendix to *Labour Report* No. 55, 1970.

### Queensland

The first formal declaration of a basic wage in Queensland determined a basic wage of \$8.50 for adult males and \$4.30 for adult females to operate from 1 March 1921. Prior to this declaration the rate of \$7.70 a week for adult males had been generally recognised in awards as the 'basic' or 'living' wage.

Since 1961 the full bench of the Industrial Conciliation and Arbitration Commission, consisting of not less than three Commissioners, has power to make declarations concerning the basic wage for males and females and the standard hours of work. The basic wage for adult males must be sufficient to maintain an employee, his wife, and family of three children in a fair and average standard of comfort. The basic wage for adult females should be not less than is sufficient to enable an employee to support herself in a fair and average standard of comfort. All persons interested must be given an opportunity to be heard before any general declaration regarding the basic wage is made, and the Commission must take into consideration any probable economic effect of such declaration.

Following the decision of the Commonwealth Conciliation and Arbitration Commission to increase total wages by \$1 a week in July 1967, the Industrial Commission increased all award rates of pay for both adult males and adult females by \$1 per week to operate from 3 July 1967. Subsequently the Commission decided that this \$1 increase would be absorbed in basic wage rates.

The Industrial Conciliation and Arbitration Commission increased the basic wages for adult males and adult females by \$1.35 a week in October 1968; the basic wage for adult males by \$1.10 a week, the basic wage for adult females by 80 cents a week and the marginal content of award rates of pay by 3 per cent in December 1969; and the basic wage for adult males by \$2.20 a week, the basic wage for adult females by \$1.70 a week, and the marginal content of award wages by 6 per cent in January 1971. In December 1971 the basic wage for adult males was increased by 95 cents a week and the basic wage for adult females by 75 cents a week. In March 1972 the basic wage for



adult males was increased by 80 cents to \$40.60 a week for the Eastern District of the Southern Division (including Brisbane) and the basic wage for adult females was increased by 60 cents to \$31.10 a week for the same area.

A guaranteed minimum wage for adult males of \$42.80 a week for the Eastern District of the Southern Division (including Brisbane) was awarded in May 1970 and increased to \$46.80 a week in January 1971.

For other areas of the State, district allowances are added to these rates (*see Labour Report* No. 55, 1970, page 190).

For further particulars of basic wage determination in Queensland *see* the annual *Labour Report*. Tables of basic wages and rates of minimum wage for adult males are published in the Appendix to *Labour Report* No. 55, 1970.

### South Australia

The first declaration of a living wage for adult male employees in the metropolitan area was \$7.95 a week operative from 4 August 1921. The first adult female living wage of \$3.50 a week operated from 1 September 1921.

Following increases in rates of pay in Commonwealth awards, since 1967 rates prescribed in South Australian State awards have been increased as set out below. The State living wages for both adult males and adult females were increased by \$1 a week in July 1967 and by \$1.35 a week in October 1968. In December 1969 an 'economic loading' of 3 per cent of the sum of the living wage and margins was included in all awards. In January 1971, this 'economic loading' was absorbed in the living wage and margins, and these were further increased by 6 per cent.

A minimum wage for adult males of \$36.05 a week was introduced in September 1966. This wage was increased by \$1 a week in July 1967, by \$1.35 a week in October 1968, by \$3.50 a week in December 1969, and by \$4 a week in January 1971.

For further information on South Australian living wages *see* the annual *Labour Report*. Tables of living wages and rates of minimum wage for adult males are published in the Appendix to *Labour Report* No. 55, 1970.

### Western Australia

The first declaration of the basic wage by the Court of Arbitration operated from 1 July 1926, when rates of \$8.50 for adult males and \$4.59 for adult females were fixed.

Legislation operative from 22 November 1968 fixed the State basic wage for adult males at \$35.45 and for adult females at \$27.08 a week. The legislation also provided for the Commission to review the basic wage at least every twelve months, the variations in the basic wage to take effect only after the expiration of twelve months from the last variation unless there were special reasons. The Commission was also required, upon application, to insert in awards provision for equal pay for male and female workers performing work of the same or like nature and of equal value. If application for equal pay was made before 30 June 1970 the difference in male and female basic wages would be removed not later than 1 January 1972. The equal pay provisions do not apply to persons engaged in work essentially or usually performed by female workers but upon which males may be employed.

The Western Australian Industrial Commission increased the basic wage for adult males by \$1.00 a week in November 1968, by \$2.00 a week in October 1970, and by \$1.00 a week in October 1971; and the basic wage for adult females by 80 cents a week in November 1968, by \$1.52 a week in October 1970, and by \$1.50 a week in October 1971.

The minimum wage for adult males of \$36.55 a week awarded in April 1967 was increased by \$1.00 a week in July 1967, by \$1.35 a week in October 1968, by \$3.50 a week in December 1969, by \$7.50 a week in October 1970, and by \$2.50 a week in October 1971.

On 26 October 1970 the Commission decided that awards would provide for additions to award rates for adult males to raise their wage rates for ordinary hours of work to 110 per cent of the sum of the basic wage and margin. This provision would not apply to those adult males who were already in receipt of this amount by virtue of award provisions or otherwise. This provision would operate from the date of amendment of each award, the first such amendment being inserted into awards in October 1970.

More detailed information on State basic wages in Western Australia appears in the annual *Labour Report*. Basic wage rates and rates of minimum wage for adult males are published in the Appendix to *Labour Report* No. 55, 1970.

**Tasmania**

Wages Boards are constituted for a number of industries from representatives of employers and employees with an independent chairman (common to all Wages Boards) with power to determine rates of wage in each industry.

Subsequent to decisions of the Commonwealth Conciliation and Arbitration Commission in National Wage Cases, Tasmanian Wages Boards varied their determinations as follows. The basic wages for adult males and adult females were increased by \$1.00 a week in either July or August 1967, and by \$1.35 a week in October 1968; the adult male basic wage was increased by \$1.05 a week, the adult female basic wage by 80 cents a week and the marginal content of award rates of pay by 3 per cent in December 1969; the basic wage for adult males was further increased by \$2.20 a week, the basic wage for adult females by \$1.70 a week and the marginal content of award rates of pay by 6 per cent in January 1971.

A minimum wage for adult males of \$38.15 a week was introduced into Wages Board determinations in July 1967. This was increased by \$2.30 a week in October 1968, by \$2.55 a week in December 1969 and by \$4 a week in January 1971.

Further details of basic wages in Tasmanian Wages Board determinations are published in the annual *Labour Report*. Basic wage rates and rates of minimum wage for adult males are published in the Appendix to *Labour Report* No. 55, 1970.

**Annual leave**

The majority of employees in Australia at present receive at least three weeks' paid annual leave. In 1964 State government employees in New South Wales were granted four weeks' paid annual leave and in 1971 South Australian government employees also obtained this benefit.

In December 1971, the Commonwealth Conciliation and Arbitration Commission rejected claims by the unions for four weeks' leave, and for an extra week's pay while on leave. The decision on the claim for an increase in the award amount of weekly payment when on leave was deferred until after the hearing of the National Wage Cases 1971-72.

More detailed information on Commonwealth and State annual leave provisions appears in the annual *Labour Report*.

**Long service leave**

Paid long service leave, i.e. leave granted to workers who remain with the one employer over an extended period of time, has been included in the provisions of Commonwealth and State industrial legislation and industrial awards. After fifteen years' continuous employment with the one employer, most employees in Australia are now entitled to at least thirteen weeks' paid long service leave. Some employees of Commonwealth and State governments and employees in certain industries are entitled to long service leave of a higher standard. In all cases the transfer of ownership of a business does not constitute a break in continuity of service with the same employer. Further information is contained in the annual *Labour Report*.

## INDUSTRIAL DISPUTES

Detailed information regarding industrial disputes involving stoppages of work is given in the *Labour Report*. A table showing statistics of industrial disputes for each year from 1913 is contained in the Appendix to *Labour Report* No. 55, 1970. Current statistics are published in the quarterly bulletin *Industrial Disputes* (6.6). Preliminary monthly figures are published in the bulletin *Industrial Disputes* (6.27).

Particulars of all disputes in progress during the year are included in the annual figures, whether the dispute commenced in that year or was in progress at the beginning of the year. Consequently, details of 'the number of disputes' and 'workers involved' in disputes which commenced in any year, and were still in progress during the following year, are included in the figures for both years.

The following table gives, for Australia as a whole, particulars of industrial disputes which were in progress during 1971, classified according to industry groups.

INDUSTRIAL DISPUTES(a): INDUSTRY GROUPS, AUSTRALIA, 1971

Industry group	Number	Workers involved ('000)			Working days lost ('000)	Estimated loss in wages (\$'000)
		Directly	Indirectly (b)	Total		
Agriculture, grazing, etc.	..	..	..	..	..	..
Coal mining	213	68.8	*	68.8	251.6	3,649.3
Other mining and quarrying	90	20.2	3.2	23.5	83.2	1,483.6
Engineering, metals, vehicles, etc.	741	401.3	17.6	418.8	636.7	8,948.6
Textiles, clothing and footwear	27	50.8	0.1	51.0	65.4	730.0
Food, drink and tobacco	224	85.1	14.2	99.3	171.4	2,199.1
Sawmilling, furniture, etc.	6	4.5	..	4.5	4.7	65.9
Paper, printing, etc.	24	6.2	..	6.2	15.3	194.8
Other manufacturing	127	27.6	0.7	28.3	88.0	1,159.2
Building and construction	284	242.3	13.9	256.2	1,208.9	19,355.7
Railway and tramway services	50	67.2	6.4	73.6	109.9	1,434.8
Road and air transport	44	25.2	2.2	27.4	141.2	2,311.1
Shipping	71	6.6	0.1	6.7	17.0	257.5
Stevedoring	312	116.1	0.1	116.2	73.9	983.7
Amusement, hotels, personal service, etc.	47	31.4	0.1	31.5	91.0	921.8
Other industries(c)	144	114.3	0.2	114.5	110.5	1,546.3
<b>Total</b>	<b>2,404</b>	<b>1,267.7</b>	<b>58.8</b>	<b>1,326.5</b>	<b>3,068.6</b>	<b>45,241.3</b>

(a) Refers only to disputes involving a stoppage of work of ten man-days or more. (b) Persons thrown out of work at the establishments where the stoppages occurred but not themselves parties to the dispute. (c) Includes communication; finance and property; wholesale and retail trade; public authority (n.e.i.); and community and business services.

\* Less than 50.

A graph on plate 25, page 273 shows, for the years 1959 to 1971, the working days lost as a result of industrial disputes in the main industry groups.

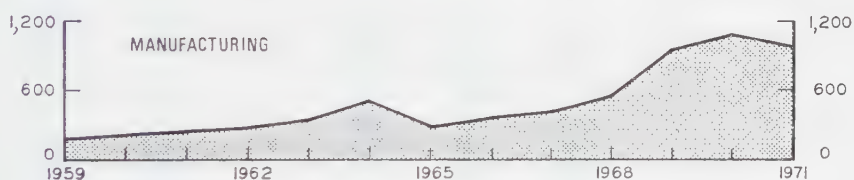
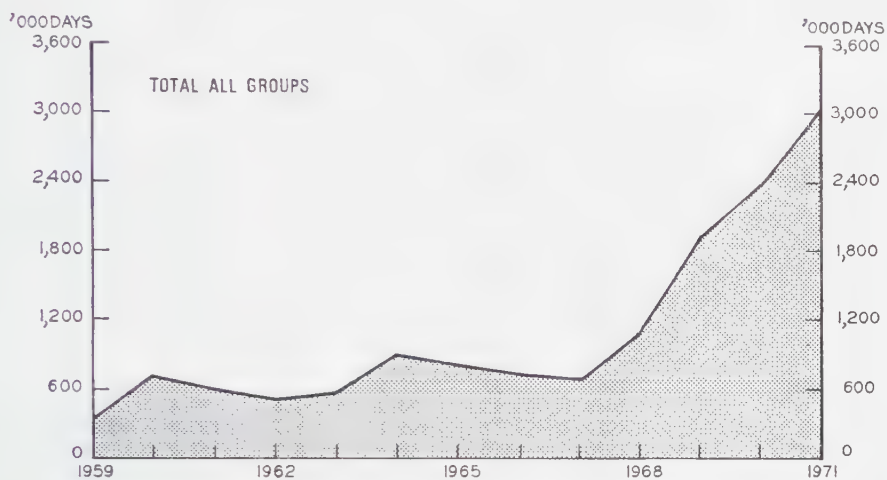
The next table, page 274, gives particulars of the number of industrial disputes in each State and Territory, together with the number of workers involved and the losses in working days and wages caused by disputes which were current during each of the years 1967 to 1971.



## INDUSTRIAL DISPUTES: AUSTRALIA

1959 TO 1971

WORKING DAYS LOST—INDUSTRY GROUPS



## INDUSTRIAL DISPUTES(a): STATES AND TERRITORIES, 1967 TO 1971

State or Territory	Year	Number	Workers involved ('000)			Working days lost ('000)	Estimated loss in wages (\$'000)
			Directly	Indirectly (b)	Total		
New South Wales.	1967	836	311.2	9.0	320.2	468.0	4,804.6
	1968	965	345.0	10.5	355.5	583.4	6,653.5
	1969	1,133	507.9	13.8	521.7	743.8	8,666.3
	1970	1,484	703.7	36.9	740.6	1,393.6	17,516.5
	1971	1,236	613.1	30.6	643.7	1,887.5	28,218.2
Victoria	1967	212	83.2	1.3	84.5	107.3	1,106.6
	1968	327	169.3	3.5	172.8	243.9	2,731.3
	1969	367	336.7	19.8	356.4	717.2	8,619.6
	1970	447	323.9	9.1	333.0	510.8	6,793.7
	1971	362	366.5	13.5	380.1	689.6	9,726.5
Queensland	1967	159	45.6	0.6	46.3	88.2	886.7
	1968	193	116.7	3.5	120.2	158.6	1,701.2
	1969	253	215.0	3.5	218.5	238.6	2,523.6
	1970	378	153.7	5.2	158.9	179.2	2,413.1
	1971	441	167.9	4.3	172.2	271.4	4,009.1
South Australia	1967	55	17.4	0.1	17.4	18.7	199.0
	1968	83	38.0	1.4	39.4	51.1	514.6
	1969	72	101.1	1.7	102.8	129.0	1,551.4
	1970	156	48.9	8.1	57.0	93.1	1,123.1
	1971	135	59.3	4.8	64.1	111.2	1,484.9
Western Australia.	1967	26	5.0	*	5.1	6.0	62.6
	1968	70	18.3	0.4	18.7	21.8	281.8
	1969	104	57.0	2.1	59.1	101.4	1,284.2
	1970	125	44.4	2.1	46.5	141.1	1,963.3
	1971	132	30.8	5.0	35.8	69.4	1,166.4
Tasmania	1967	29	6.2	*	6.2	7.3	82.3
	1968	28	7.5	0.3	7.8	13.0	149.0
	1969	44	8.6	0.1	8.7	9.9	115.3
	1970	66	12.8	2.0	14.8	32.2	451.1
	1971	46	14.1	0.5	14.7	20.6	317.3
Northern Territory	1967	16	2.7	..	2.7	9.1	113.7
	1968	37	3.7	..	3.7	4.6	50.2
	1969	33	8.0	0.2	8.2	8.7	124.8
	1970	62	11.6	*	11.6	27.0	424.4
	1971	41	9.5	0.1	9.6	15.7	271.4
Australian Capital Territory	1967	7	0.9	..	0.9	0.8	7.5
	1968	10	2.3	..	2.3	3.0	33.7
	1969	8	9.8	*	9.8	9.4	100.6
	1970	20	5.1	*	5.1	16.8	198.2
	1971	11	6.3	..	6.3	3.3	47.4
Australia	1967	1,340	472.2	11.1	483.3	705.3	7,263.1
	1968	1,713	700.8	19.5	720.3	1,079.5	12,115.2
	1969	2,014	1,244.0	41.2	1,285.2	1,958.0	22,985.7
	1970	2,738	1,304.2	63.3	1,367.4	2,393.7	30,883.3
	1971	2,404	1,267.7	58.8	1,326.5	3,068.6	45,241.3

(a) Refers only to disputes involving a stoppage of work of ten man-days or more. (b) Persons thrown out of work at the establishments where the stoppage occurred but not themselves parties to the dispute.

\* Less than 50.

## Duration of disputes

The duration of each industrial dispute involving a loss of work, i.e. the time between the cessation and resumption of work, has been calculated in working days, exclusive of Saturdays, Sundays and holidays, except where the establishment involved carries on a continuous process (e.g. metal smelting and cement manufacture).

The following table shows, for the year 1971, industrial disputes in coal mining, engineering, etc., stevedoring and other industries classified according to duration.

## INDUSTRIAL DISPUTES(a): DURATION, BY INDUSTRY GROUP, AUSTRALIA, 1971

Duration (working days)	Workers involved(b)			Working days lost		Estimated loss in wages (\$'000)
	Number	Number ( <sup>'000</sup> )	Proportion of total (per cent)	Number ( <sup>'000</sup> )	Proportion of total (per cent)	
COAL MINING						
Up to 1 day . . . . .	110	30.9	44.8	30.5	12.1	483.6
Over 1 to 2 days . . . . .	41	5.5	8.0	9.9	3.9	146.0
Over 2 to 3 days . . . . .	32	16.4	23.8	47.4	18.8	643.6
Over 3 to less than 5 days . . . . .	16	1.8	2.6	7.1	2.8	96.1
5 to less than 10 days . . . . .	10	2.0	2.9	14.3	5.7	217.5
10 to less than 20 days . . . . .	4	12.3	17.9	142.4	56.6	2,062.4
20 to less than 40 days . . . . .	..	..	..	..	..	..
40 days and over . . . . .	..	..	..	..	..	..
Total . . . . .	213	68.8	100.0	251.6	100.0	3,649.3
ENGINEERING, METALS, VEHICLES, ETC.						
Up to 1 day . . . . .	286	332.1	79.3	283.8	44.6	4,031.0
Over 1 to 2 days . . . . .	135	22.1	5.3	32.1	5.0	459.6
Over 2 to 3 days . . . . .	86	27.2	6.5	69.3	10.9	895.1
Over 3 to less than 5 days . . . . .	97	14.1	3.4	55.8	8.8	769.1
5 to less than 10 days . . . . .	100	19.0	4.5	120.1	18.9	1,636.6
10 to less than 20 days . . . . .	27	3.6	0.9	50.6	7.9	751.3
20 to less than 40 days . . . . .	8	0.6	0.1	14.6	2.3	216.5
40 days and over . . . . .	2	0.2	0.1	10.4	1.6	189.5
Total . . . . .	741	418.8	100.0	636.7	100.0	8,948.6
STEVEDORING						
Up to 1 day . . . . .	255	95.2	81.9	40.2	54.4	530.8
Over 1 to 2 days . . . . .	38	20.0	17.2	29.5	39.9	390.2
Over 2 to 3 days . . . . .	8	0.4	0.3	1.0	1.4	13.7
Over 3 to less than 5 days . . . . .	6	0.3	0.3	1.1	1.5	15.8
5 to less than 10 days . . . . .	4	0.3	0.2	1.9	2.5	30.7
10 to less than 20 days . . . . .	1	*	..	0.2	0.3	2.6
20 to less than 40 days . . . . .	..	..	..	..	..	..
40 days and over . . . . .	..	..	..	..	..	..
Total . . . . .	312	116.2	100.0	73.9	100.0	983.7
OTHER INDUSTRIES						
Up to 1 day . . . . .	468	398.7	55.2	278.3	13.2	3,752.2
Over 1 to 2 days . . . . .	196	116.1	16.1	190.1	9.0	2,633.6
Over 2 to 3 days . . . . .	143	42.8	5.9	117.1	5.6	1,717.9
Over 3 to less than 5 days . . . . .	113	34.5	4.8	138.3	6.6	1,936.1
5 to less than 10 days . . . . .	129	56.6	7.8	405.1	19.2	5,978.0
10 to less than 20 days . . . . .	64	72.5	10.0	925.9	44.0	14,638.2
20 to less than 40 days . . . . .	21	0.7	0.1	16.7	0.8	252.5
40 days and over . . . . .	4	0.8	0.1	35.0	1.7	751.3
Total . . . . .	1,138	722.6	100.0	2,106.4	100.0	31,659.7
ALL INDUSTRIES						
Up to 1 day . . . . .	1,119	856.8	64.6	632.8	20.6	8,797.5
Over 1 to 2 days . . . . .	410	163.7	12.3	261.6	8.5	3,629.4
Over 2 to 3 days . . . . .	269	86.7	6.5	234.8	7.7	3,270.3
Over 3 to less than 5 days . . . . .	232	50.6	3.8	202.2	6.6	2,817.0
5 to less than 10 days . . . . .	243	77.9	5.9	541.5	17.6	7,862.7
10 to less than 20 days . . . . .	96	88.5	6.7	1,119.1	36.5	17,454.5
20 to less than 40 days . . . . .	29	1.3	0.1	31.3	1.0	469.0
40 days and over . . . . .	6	1.0	0.1	45.4	1.5	940.8
Grand Total . . . . .	2,404	1,326.5	100.0	3,068.6	100.0	45,241.3

(a) Refers only to disputes involving a stoppage of work of ten man-days or more. (b) Includes workers indirectly involved. See footnote (b) to table on page 274.

\* Less than 50.



## Causes of disputes

In the following table causes of industrial disputes (that is, the direct *causes of stoppages of work*) are analysed in four industry groups and grouped under the following headings.

*Wages*—claims involving general principles relating to wages, including combined claims relating to wages, hours or conditions of work. *Hours of work*—claims involving general principles relating to hours of work. *Leave, pensions, compensation provisions, etc.*—claims involving general principles relating to these provisions. *Managerial policy*—disputes concerning managerial policy of employers including computation of wages, hours, leave, etc. in individual cases; docking pay, etc.; dismissals, etc.; principles of promotion, etc.; employment of particular persons and personal disagreements; production limitations, etc. *Physical working conditions*—disputes concerning physical working conditions including safety issues; protective clothing and equipment, etc.; amenities; shortage of, or condition of, equipment or material; new production methods, etc.; arduous physical tasks, etc. *Trade unionism*—disputes concerning employment of non-unionists; inter-union and intra-union disputes; sympathy stoppages; recognition of union activities, etc. *Other*—disputes concerning protests directed against persons or situations other than those dealing with employer-employee relationship; non-award public holidays; accidents and funerals; no reason given for stoppage, etc.

For more information concerning these classifications of causes see the quarterly bulletin *Industrial Disputes* (6.6.).

## INDUSTRIAL DISPUTES(a): CAUSES, INDUSTRY GROUPS, AUSTRALIA, 1971

Cause of dispute	Engineering, metals, vehicles, etc.				
	Coal mining	Steel- doring	Other industries	All industries	
Number of disputes—					
Wages . . . . .	53	341	20	466	880
Hours of work . . . . .	4	1	2	10	17
Leave, pensions and compensation provisions, etc. . . . .	..	11	4	18	33
Managerial policy . . . . .	48	208	117	326	699
Physical working conditions . . . . .	39	59	92	135	325
Trade unionism . . . . .	48	97	29	112	286
Other . . . . .	21	24	48	71	164
<b>Total disputes . . . . .</b>	<b>213</b>	<b>741</b>	<b>312</b>	<b>1,138</b>	<b>2,404</b>
Workers involved(b) ('000)—					
Wages . . . . .	40.1	271.6	8.6	435.3	755.5
Hours of work . . . . .	0.9	0.1	0.6	5.4	6.9
Leave, pensions and compensation provisions, etc. . . . .	..	3.3	4.3	12.0	19.5
Managerial policy . . . . .	6.4	41.0	33.9	73.6	155.0
Physical working conditions . . . . .	8.0	9.7	15.6	28.3	61.7
Trade unionism . . . . .	7.9	21.0	2.8	27.3	59.0
Other . . . . .	5.6	72.3	50.4	140.6	268.9
<b>Total workers involved . . . . .</b>	<b>68.8</b>	<b>418.8</b>	<b>116.2</b>	<b>722.6</b>	<b>1,326.5</b>
Working days lost ('000)—					
Wages . . . . .	200.9	429.4	6.7	1,536.8	2,173.9
Hours of work . . . . .	0.9	0.1	0.1	6.0	7.0
Leave, pensions and compensation provisions, etc. . . . .	..	7.4	3.8	20.8	31.9
Managerial policy . . . . .	19.0	85.9	18.1	214.2	337.1
Physical working conditions . . . . .	12.1	20.7	10.5	128.1	171.4
Trade unionism . . . . .	11.3	53.0	2.7	79.0	146.2
Other . . . . .	7.5	40.2	31.9	121.4	201.0
<b>Total working days lost . . . . .</b>	<b>251.6</b>	<b>636.7</b>	<b>73.9</b>	<b>2,106.4</b>	<b>3,068.6</b>

(a) Refers only to disputes involving a stoppage of work of ten man-days or more involved. See footnote (b) to table on page 274.

(b) Includes workers indirectly

**Methods of settlement of disputes**

The following table shows particulars of industrial disputes for 1971, classified according to method of settlement, in four industry groups. These statistics relate to the method directly responsible for *ending the stoppage of work*. For more information concerning this classification of methods of settlement see the quarterly bulletin, *Industrial Disputes* (6.6).

**INDUSTRIAL DISPUTES(a): METHODS OF SETTLEMENT, INDUSTRY GROUPS  
AUSTRALIA, 1971**

<i>Method of settlement</i>	<i>Coal mining</i>	<i>Engin- eering, metals, vehicles, etc.</i>	<i>Steve- doring</i>	<i>Other industries</i>	<i>All industries</i>
<b>NUMBER OF DISPUTES</b>					
Private negotiation . . . . .	35	189	18	306	548
Mediation not based on legislation . . . . .	..	5	..	11	16
State legislation—					
Under State conciliation, etc. legislation . . . . .	7	38	..	131	176
Reference to State Government officials . . . . .	..	..	..	1	1
Commonwealth and Commonwealth-State legislation—					
Industrial Tribunals under—					
Conciliation and Arbitration Act . . . . .	3	86	2	96	187
Coal Industry Acts . . . . .	11	..	..	..	11
Stevedoring Industry Act . . . . .	..	..	4	..	4
Other Acts . . . . .	..	..	..	..	..
Reference to Commonwealth Government officials . . . . .	..	..	..	..	..
Filling places of workers on strike or locked out . . . . .	..	..	..	..	..
Closing down establishment permanently . . . . .	..	..	..	..	..
Resumption without negotiation . . . . .	157	423	288	593	1,461
Other methods . . . . .	..	..	..	..	..
<b>Total . . . . .</b>	<b>213</b>	<b>741</b>	<b>312</b>	<b>1,138</b>	<b>2,404</b>
<b>WORKERS INVOLVED(b) ('000)</b>					
Private negotiation . . . . .	5.9	21.0	1.6	56.6	85.1
Mediation not based on legislation . . . . .	..	0.9	..	0.7	1.6
State legislation—					
Under State conciliation, etc. legislation . . . . .	0.5	7.3	..	70.8	78.6
Reference to State Government officials . . . . .	..	..	..	*	*
Commonwealth and Commonwealth-State legislation—					
Industrial Tribunals under—					
Conciliation and Arbitration Act . . . . .	0.4	12.8	0.1	68.2	81.5
Coal Industry Acts . . . . .	2.1	..	..	..	2.1
Stevedoring Industry Act . . . . .	..	..	0.3	..	0.3
Other Acts . . . . .	..	..	..	..	..
Reference to Commonwealth Government officials . . . . .	..	..	..	..	..
Filling places of workers on strike or locked out . . . . .	..	..	..	..	..
Closing down establishment permanently . . . . .	..	..	..	..	..
Resumption without negotiation . . . . .	59.9	376.8	114.2	526.3	1,077.2
Other methods . . . . .	..	..	..	..	..
<b>Total . . . . .</b>	<b>68.8</b>	<b>418.8</b>	<b>116.2</b>	<b>722.6</b>	<b>1,326.5</b>

For footnotes see next page.

**INDUSTRIAL DISPUTES(a): METHODS OF SETTLEMENT, INDUSTRY GROUPS  
AUSTRALIA, 1971—continued**

<i>Method of settlement</i>	<i>Coal mining</i>	<i>Engineer- ing, metals, vehicles, etc.</i>	<i>Steve- doring</i>	<i>Other industries</i>	<i>All industries</i>
<b>WORKING DAYS LOST ('000)</b>					
Private negotiation . . . . .	11.1	76.4	1.9	261.0	350.4
Mediation not based on legislation . . . . .	..	1.5	..	3.3	4.9
State legislation—					
Under State conciliation, etc. legislation . . . . .	1.3	41.1	..	647.7	690.1
Reference to State Government officials . . . . .	..	..	..	*	*
Commonwealth and Commonwealth-State legislation—					
Industrial Tribunals under—					
Conciliation and Arbitration Act . . . . .	0.8	75.4	0.4	555.2	631.8
Coal Industry Acts . . . . .	2.9	..	..	..	2.9
Stevedoring Industry Act . . . . .	..	..	0.3	..	0.3
Other Acts . . . . .	..	..	..	..	..
Reference to Commonwealth Government officials . . . . .	..	..	..	..	..
Filling places of workers on strike or locked out . . . . .	..	..	..	..	..
Closing down establishment permanently . . . . .	..	..	..	..	..
Resumption without negotiation . . . . .	235.5	442.2	71.3	639.1	1,388.1
Other methods . . . . .	..	..	..	..	..
<b>Total . . . . .</b>	<b>251.6</b>	<b>636.7</b>	<b>73.9</b>	<b>2,106.4</b>	<b>3,068.6</b>

(a) Refers only to disputes involving a stoppage of work of ten man-days or more. involved. See footnote (b) to table on page 274.

(b) Includes workers indirectly

\* Less than 50.

## WORKERS' COMPENSATION LEGISLATION

A conspectus of the principal provisions of Workers' Compensation Acts and Ordinances in force in Australia at 31 December 1970 is included in *Labour Report* No. 55, 1970, pages 269–81.

## LABOUR ORGANISATIONS

### Labour organisations in Australia

The figures shown in this section are prepared from a special collection of membership of labour organisations at 31 December each year. The affairs of single unions are not disclosed in the published results and this has assisted in securing complete information. The Bureau is indebted to the secretaries of trade unions for their co-operation in supplying information. More detailed statistics appear in the annual *Labour Report*. Current figures are published in an annual bulletin, *Trade Union Statistics: Australia* (6.24).

#### Trade unions

For the purpose of these statistics a trade union is defined as an organisation consisting predominantly of employees and whose principal activities include the negotiation of rates of pay and conditions of employment for its members.

The trade unions in Australia are very diverse in character, and range from the small independent association to the large interstate organisation, which, in its turn, may be a branch of an international body. Broadly speaking, there are four distinct classes of labour organisations: (a) the local independent, (b) the State, (c) the interstate, and (d) the Australasian or international; but a number of variations occur from each of these classes. The schemes of organisation of interstate or federated unions vary greatly in character. In some unions the State organisations are bound together under a system of unification with centralised control, while in others the State units are practically independent and self-governing, the federal bond being loose and existing only for one or two specified purposes. Statistics relating to interstate or federated trade unions are shown in a table on page 280.

Returns showing membership by States and Territories at 31 December each year are obtained for all trade unions and employee organisations. The following table shows the position at the end of each of the years 1969 to 1971.



**TRADE UNIONS: NUMBER AND MEMBERSHIP, STATES AND TERRITORIES  
DECEMBER 1969 TO 1971**

State or Territory	Number of separate unions			Number of members ( <sup>0</sup> 000)			Percentage increase in membership(a)		
	1969	1970	1971	1969	1970	1971	1969	1970	1971
New South Wales . . . .	210	208	204	884.8	912.3	971.6	2.7	3.1	6.5
Victoria . . . . .	152	156	157	559.8	591.5	617.7	1.7	5.7	4.4
Queensland . . . . .	135	139	140	336.4	330.2	337.6	0.7	-1.8	2.2
South Australia . . . .	135	137	139	194.2	202.7	215.9	4.6	4.4	6.5
Western Australia . . . .	153	155	154	162.2	168.6	178.3	0.8	4.0	5.7
Tasmania . . . . .	112	114	111	69.9	73.9	75.2	2.4	5.8	1.8
Northern Territory(b) . .	43	45	51	5.9	6.6	8.1	(b)	(b)	(b)
Australian Capital Territory(b)	70	82	82	26.0	28.8	32.2	(b)	(b)	(b)
<b>Australia . . . . .</b>	<b>(c)309</b>	<b>(c)305</b>	<b>(c)303</b>	<b>2,239.1</b>	<b>2,314.6</b>	<b>2,436.6</b>	<b>2.2</b>	<b>3.4</b>	<b>5.3</b>

(a) On preceding year. (b) Some unions in the Territories are affiliated with State organisations and their membership is reported under the heading of that State. More accurate reporting of membership by location over the years is reflected in the annual figures for the Territories and this affects their comparability over time. (c) Without interstate duplication *see* below.

Minus sign (—) denotes decrease.

In the preceding table, under the heading 'Number of separate unions', a union reporting members in a State or Territory is counted as one union within that State or Territory. The figures do not add to the Australian total (shown in the last line) because a union represented in more than one State or Territory is included in the figure for each State or Territory in which it is represented, but is counted only once in the Australian total.

A table showing the number and membership of trade unions in Australia for each year since 1912 is included in the Appendix to *Labour Report* No. 55, 1970.

The following table shows the number of unions and members thereof in Australia at the end of each of the years 1969 to 1971 classified according to industry group. The table does not supply a precise classification of trade unions and their members by industry, because where the members of a union are employed in a number of industries they have been classified to the predominant industry for the union concerned. Comparability between years of membership figures for an industry group may be affected by amalgamation of trade unions classified to different industry groups.

**TRADE UNIONS: INDUSTRY GROUPS, AUSTRALIA, DECEMBER 1969 TO 1971**

Industry group	1969		1970		1971	
	No. of unions (a)	No. of members ( <sup>0</sup> 000)	No. of unions (a)	No. of members ( <sup>0</sup> 000)	No. of unions (a)	No. of members ( <sup>0</sup> 000)
Agriculture, grazing, etc. . . . .	3	58.3	3	55.4	3	54.8
Mining and quarrying . . . . .	12	34.2	12	35.3	12	37.0
Manufacturing—						
Engineering, metals, vehicles, etc. . . . .	9	363.4	9	389.3	9	405.0
Textiles, clothing and footwear . . . . .	5	99.9	5	101.7	5	96.7
Food, drink and tobacco . . . . .	28	134.3	27	143.1	26	153.0
Sawmilling, furniture, etc. . . . .	6	32.8	6	32.1	6	32.6
Paper, printing, etc. . . . .	5	59.9	5	61.7	5	62.3
Other manufacturing . . . . .	22	90.4	21	91.8	21	91.3
<b>All manufacturing groups . . . . .</b>	<b>75</b>	<b>780.5</b>	<b>73</b>	<b>819.6</b>	<b>72</b>	<b>840.8</b>
Building and construction . . . . .	20	139.1	20	135.1	20	143.9
Railway and tramway services . . . . .	22	123.7	21	122.2	21	121.8
Road and air transport . . . . .	12	80.4	13	84.1	13	91.4
Shipping and stevedoring . . . . .	12	30.6	12	31.1	12	31.8
Banking, insurance and clerical . . . . .	14	149.0	13	153.2	13	173.7
Wholesale and retail trade . . . . .	11	88.3	11	86.7	12	116.6
Public administration(b) . . . . .	69	457.2	70	475.6	68	488.5
Amusement, hotels, personal service, etc. . . . .	21	62.4	21	64.3	20	66.6
Other industries(c) . . . . .	38	235.3	36	252.0	37	269.6
<b>Total . . . . .</b>	<b>309</b>	<b>2,239.1</b>	<b>305</b>	<b>2,314.6</b>	<b>303</b>	<b>2,436.6</b>

(a) Without interstate duplication. *See* text above.

(b) Includes communication, municipal, etc.

(c) Includes community and business services.

*Number of trade union members and proportion of wage and salary earners.* The following table shows the approximate percentages of wage and salary earners in employment who are members of trade unions. The estimates of total wage and salary earners have been obtained by adding the number of employees in agriculture and in private domestic service recorded at the June 1966 population census to the estimates of employees in all other industries at the end of each year. For this reason, and also because the membership of trade unions includes some persons not in employment, the percentages shown in the table are approximations. The percentages shown in this table are not directly comparable with those shown in Year Book No. 55, 1969 and earlier issues because the present estimates are based on a new series of employment estimates as from June 1966 *see* Chapter 20, Employment and Unemployment. The difference is of most significance for female employees as the current employment estimates include a considerable number of part-time employees who had previously been excluded.

**TRADE UNIONS: NUMBER OF MEMBERS AND PROPORTION OF TOTAL WAGE AND SALARY EARNERS, AUSTRALIA, 1967 TO 1971**

End of December—	Number of members (‘000)			Proportion of total wage and salary earners(a) (Per cent)		
	Males	Females	Persons	Males	Females	Persons
1967 . . . . .	1,663.7	487.6	2,151.3	59	37	52
1968 . . . . .	1,691.1	499.5	2,190.7	59	36	51
1969 . . . . .	1,717.5	521.6	2,239.1	58	36	50
1970 . . . . .	1,750.6	564.1	2,314.6	57	36	50
1971 . . . . .	1,818.2	618.3	2,436.6	59	39	52

(a) See text above.

*Interstate or federated trade unions.* The following table gives particulars of the number and membership of interstate or federated trade unions in 1971.

**INTERSTATE OR FEDERATED TRADE UNIONS(a): AUSTRALIA, DECEMBER 1971**

	Unions operating in—					Total
	2 States	3 States	4 States	5 States	6 States	
Number of unions . . . . .	12	6	16	32	81	147
Number of members (‘000) . . . . .	24.3	21.0	104.2	425.9	1,660.5	2,235.9

(a) Certain unions in this group have, in addition to branches in the States, branches in the Northern Territory or the Australian Capital Territory or both.

**Employer and employee organisations registered under Industrial Arbitration Acts, etc.**

The Commonwealth *Conciliation and Arbitration Act* 1901–1970 and a number of State industrial arbitration acts provide for the registration of employer and employee organisations as outlined below. For further details *see* the annual *Labour Report*. In general, registration is necessary before an organisation may appear before the relevant industrial arbitration tribunal.

In Victoria and Tasmania where wages and conditions of work in the State sphere are determined by Wages Boards there is no provision in industrial arbitration legislation for registration of trade unions or employer organisations.

*Commonwealth.* At the end of 1971 the number of employers’ organisations registered under the provisions of the *Conciliation and Arbitration Act* 1901–1970 was 77. The number of unions registered at the end of 1971 was 154, with membership of 1,984,179, representing 81 per cent of the total membership of all trade unions in Australia. Lists of organisations of employees and employers registered under this Act are contained in the *Industrial Information Bulletin*, Vol. 27 No. 1, January 1972 published by the Department of Labour and National Service.

*New South Wales.* At 30 June 1971 there were 138 employee unions and 282 employer unions registered under provisions of the Industrial Arbitration Act, 1940–1969, and 155 employee unions, 18 employer unions, and 1 other union registered under the Trade Union Act, 1881–1965. Lists of unions registered under these Acts are included in the *New South Wales Industrial Gazette* (*see* Vol. 182 Part 1 for details as at 30 June 1971).

*Queensland.* At 31 December 1971 there were 78 employee unions registered under the *Industrial Conciliation and Arbitration Acts, 1961 to 1964*, with a reported membership of 291,410. At the same date 39 employer unions with a reported membership of 39,677 employers were registered. Lists of registered employee and employer unions are published in the annual report of the President of the Industrial Court.

*South Australia.* At the end of December 1971 there were 2 employer associations and 51 employee associations registered under the provisions of the Industrial Code, 1967-70. Membership of these employee associations totalled 133,164.

*Western Australia.* At 30 June 1971 there were 99 unions of workers, with an aggregate membership of 149,846, registered under the provisions of the *Industrial Arbitration Act, 1912-1971*. At the same date there were 13 registered unions of employers with a reported aggregate membership of 1,864 employers. Lists of registered unions of workers and of employers together with membership figures are published in the *Western Australian Industrial Gazette* (see Vol. 51, pages 159-61, Appendix XXIII).

### Central labour organisations

*Trades and Labour Councils.* Delegate organisations, usually known as Trades Hall Councils or Labour Councils and consisting of representatives of a number of trade unions, have been established in the capital cities and in a number of other centres in each State. In the centres where these councils exist most unions or local branches operating in the district are affiliated. The district councils obtain their finance by means of a *per capita* tax on members of affiliated unions.

The following table shows, for each State and Territory, the number of trades and labour councils and the number of affiliated unions or branches of unions at the end of 1971. The figures for the number of unions do not necessarily represent separate unions, since the branches of a large union may be affiliated with the local trades councils in the several towns in which they are represented.

CENTRAL LABOUR ORGANISATIONS: NUMBER, AND UNIONS AND BRANCH UNIONS  
AFFILIATED, STATES AND TERRITORIES, DECEMBER 1971

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total
Number of councils	11	9	13	8	3	2	..	1	47
Number of unions and branch unions affiliated	345	269	206	185	122	82	..	11	1,220

As well as trades and labour councils there are councils organised on trade lines and composed of delegates from separate unions whose members' interests are closely connected by reason of their occupations. Delegate councils of unions connected directly or indirectly with the metal trades, or with the building trades, are examples of such organisations.

*Australian Council of Trade Unions.* A central labour organisation, now called the Australian Council of Trade Unions, came into being during 1927. The Council was created to function on behalf of the trade unions of Australia, and was founded at an All-Australian Trade Union Congress held in Melbourne in May 1927. The A.C.T.U. consists of affiliated unions and approved State Trades and Labour Councils and Provincial Councils. The State Trades and Labour Council in each State is the State Branch of the A.C.T.U. and it has the right to appoint one representative to act on the executive of the Council. In addition to the four A.C.T.U. officers and representatives of the State Branches of the A.C.T.U., seven delegates are elected by and from Congress, one from each, of the following industry groups: Building, Food and distributing services, Manufacturing, Metal Services, Transport, and the A.W.U. group. The President and Secretary are full-time officials and, with the two Vice-Presidents, are elected by and from the Australian Congress of Trade Unions. The ordinary meetings of Congress are held in alternate years. The 1971 Biennial Congress was held in August-September 1971. Special meetings of Congress are held whenever deemed advisable by decision of the executive, as approved by the majority of its branches, or by resolution supported by unions representing one-third of the total membership of the A.C.T.U.

For further particulars see the annual *Labour Report*.

*Other.* In addition to the A.C.T.U., other central labour organisations exist. These include the *Australian Council of Salaried and Professional Associations*, the *Council of Commonwealth Public Service Organisations*, and the *Council of Professional Associations*. Details of these councils will be found in *Labour Report* No. 55, 1970, pages 290-1.



### International Labour Organisation

The International Labour Organisation (I.L.O.) was established on 11 April 1919, as an autonomous institution associated with the League of Nations. Its original constitution was adopted as Part XIII of the Treaty of Versailles. With certain amendments this constitution remains the charter of I.L.O. to this day, bringing governments, employers and trade unions together to discuss international labour and social problems. A new definition of the aims and purposes of the I.L.O., known as the Declaration of Philadelphia, was added to the constitution at the 1944 Session of the International Labour Conference and this asserted the responsibility of I.L.O. in combating poverty and insecurity. In 1946 the Organisation became the first of the specialised agencies of the United Nations. Under the terms of agreement, the United Nations recognises the I.L.O. as a specialised agency having responsibility in the field defined by its constitution, which embraces labour conditions, industrial relations, employment organisation, social security and other aspects of social policy.

The Organisation has three basic parts. These are the International Labour Conference, its highest authority, which usually meets annually; the Governing Body its executive council, which usually meets three times each year; and the International Labour Office, which provides the Secretariat of the Organisation. The Conference is composed of delegations from the member States of the Organisation. At the end of 1971 there were 121 member States, each of which is entitled to be represented by four delegates—two representing the government, one representing employers and one representing workers, together with their advisers. Each delegate speaks and votes independently, so that all points of view in each country are fully expressed. The Governing Body consists of the representatives of twenty-four governments, and twelve employers' and twelve workers' representatives. Particulars are given in *Labour Report* No. 55, 1970 of the proceedings of International Labour Conferences up to the 55th Session, held in Geneva in October 1970. For details of I.L.O. conventions ratified by Australia, see *Labour Report* No. 55, 1970, pages 293–5.

## CHAPTER 11

### OVERSEAS TRANSACTIONS

This chapter includes statistics of overseas trade, balance of payments, and overseas investment by private investors, but because of limitations of space the statistics are, in the main, restricted to summarised form. For detailed information see the *Annual Bulletin of Overseas Investment, Australia* (5.20); and the other annual bulletins *Overseas Trade* (preliminary (8.15) (8.16) and final (8.11)), *Australian Exports* (8.4), *Australian Imports* (8.19), *Imports Cleared for Home Consumption* (issued in two parts) (8.7) and the half-yearly bulletin *Balance of Payments* (8.1). Preliminary information is available in summary form in the statements *Balance of Payments—Quarterly Summary* (8.2), *Overseas Investment—Preliminary Bulletin* (annual) (5.21), *Australian Overseas Trade—Exports and Imports* (8.12) (monthly), *Overseas Trade—Exports by Commodity Divisions* (monthly) (8.18), and *Overseas Trade—Imports by Commodity Divisions* (monthly) (8.13). Current information is included in the *Quarterly Summary of Australian Statistics* (1.3), the *Monthly Review of Business Statistics* (1.4), the *Digest of Current Economic Statistics* (1.5), and in more detail in the *Monthly Bulletin of Overseas Trade Statistics* (8.9) (8.10). There are also the following additional mimeographed statements: *Exports of Principal Products of Australian Origin* (monthly) (8.5), *Imports of Assembled New Motor Cars* (monthly) (8.8), *Overseas Trade with Major Groups of Countries* (quarterly) (8.14), *Highlights of Overseas Trade* (quarterly) (8.23), and *Trade of Australia with Eastern Countries* (annually) (8.17). Additional unpublished details of exports and imports can be supplied on request.

A subscription service is available from this Bureau to provide for the detailed requirements of individual users of overseas trade statistics. These special periodical returns are obtainable monthly or quarterly and show trade according to items of the Australian Export and Import Commodity Classifications or statistical key code dissections of Australian Customs Tariff items. A nominal charge is made which varies depending on the amount of detail required.

### OVERSEAS TRADE

#### Constitutional provisions and legislation

##### Constitutional provisions

By the Commonwealth of Australia Constitution Act, Section 51 (1), the power to make laws with respect to trade and commerce with other countries was conferred on the Commonwealth Parliament. Under Section 86 of the Constitution, the collection and control of duties of customs and excise passed to the Executive Government of the Commonwealth on 1 January 1901. Other references to trade and commerce are contained in Sections 87 to 95 of the Constitution (*see* pages 17–18).

##### Commonwealth legislation

Commonwealth legislation affecting overseas trade includes: the Customs Act, the Customs Tariff and the Customs Tariff (Dumping and Subsidies) Act. The Customs Act is the administrative Act under which the Department of Customs and Excise operates. The Customs Tariff provides the statutory authority for imposing the actual rates of duty operative from time to time, while the Customs Tariff (Dumping and Subsidies) Act provides protection for Australian industry against various forms of unfair trading.

##### The Customs Tariff

The first Commonwealth Customs Tariff was introduced by Resolution on 8 October 1901, from which date uniform duties came into effect throughout Australia. The Australian Customs Tariff has been developed in conformity with the policy of protecting economic and efficient Australian industries and of granting preferential treatment to certain imports from countries of the Commonwealth and certain developing countries. Duties are imposed on some goods, generally of a luxury nature, for revenue purposes. Customs collections are a major source of revenue but in its protective character the tariff has an important influence on the Australian economy.

The present tariff provides for general and preferential rates of duty, and its structure is based on the 'Brussels Nomenclature' which has its origins in the Convention on Nomenclature for the Classification of Goods in Customs Tariffs, signed in Brussels on 15 December 1950. Australia has operated a 'Brussels-type' tariff since 1 July 1965.

*Preferential rates.* Preferential rates apply to goods the produce or manufacture of the United Kingdom, Ireland, Canada, New Zealand, and Papua New Guinea, and certain goods the produce or manufacture of specified countries, provided that such goods comply with the laws in force at the time affecting the grant of preference.

The following are the rules of origin for preference purposes as defined in the Customs Act.

'151.—(1.) For the purposes of this Act and the *Customs Tariff* 1966–1971 (other than section twenty of the last-mentioned Act), goods shall be treated as the produce of a country if they are unmanufactured raw products of the country.

(2.) For the purposes of this Act and the *Customs Tariff* 1966–1971 (other than section twenty or a direction under section thirty-three "c" of the last-mentioned Act), goods shall be treated as the manufacture of a country—

(a) if the goods were wholly manufactured in the country from materials of one or more of the following classes:

- (i) unmanufactured raw products;
- (ii) materials wholly manufactured in the country or in Australia, or in the country and in Australia; and
- (iii) imported materials that the Minister has, in relation to the country, determined, by notice published in the *Gazette*, to be manufactured raw materials; or

(b) if the goods were partly manufactured in the country, the process last performed in the manufacture of the goods was performed in the country and—

- (i) not less than three-quarters, or, in a case where the country is New Zealand, one-half, of the factory or works cost of the goods is represented by the value of labour or materials, or of labour and materials, of the country or of the country and Australia;
- (ii) in a case where the goods are goods of a class or kind not commercially manufactured in Australia, not less than one-quarter of the factory or works cost of the goods is represented by the value of labour or materials, or of labour and materials, of the country or of the country and Australia; or
- (iii) in a case where the country is New Zealand, not less than three-quarters of the factory or works cost of the goods is represented by the value of labour or materials, or of labour and materials, of New Zealand and the United Kingdom or of New Zealand, Australia and the United Kingdom.

(3.) For the purposes of a direction under section thirty-three "c" of the *Customs Tariff* 1966–1971 goods shall be treated as the manufacture of a country if—

- (a) the process last performed in the manufacture of the goods was performed in the country; and
- (b) not less than one-half of the factory or works cost of the goods is represented by the value of labour or materials, or of labour and materials, of the country or of the country and one or more of the following countries, that is to say, Australia and countries that, at the time the goods are entered for home consumption, are less developed countries, other than a country that, by virtue of a direction under sub-section (2) of section eleven of the *Customs Tariff* 1966–1971 is not to be treated as a less developed country in relation to the class of goods in which the goods are included.

'151A.—(1.) For the purposes of this Act and the *Customs Tariff* 1966–1971 (other than section twenty or a direction under section thirty-three "c" of the last-mentioned Act), goods shall not be treated as the produce or manufacture of the United Kingdom, Canada, New Zealand, Ireland, Malawi, Rhodesia, Zambia, the Territory of Papua or the Territory of New Guinea unless they have been shipped from that country to Australia and, except where the Collector is satisfied that the intended destination of the goods when originally shipped from that country was Australia, have not been transhipped.

(2.) The last preceding sub-section does not apply—

- (a) to goods the produce or manufacture of a country other than New Zealand that are imported into Australia from New Zealand; or



(b) to goods the produce or manufacture of a country other than the Territory of Papua or the Territory of New Guinea that are imported into Australia from the Territory of Papua or the Territory of New Guinea.

(3.) For the purposes of a direction under section thirty-three "c" of the *Customs Tariff* 1966-1971, goods shall not be treated as the produce or manufacture of a country unless they have been shipped from that country to Australia and, except where the Collector is satisfied that the intended destination of the goods when originally shipped from that country was Australia, have not been transhipped.

(4.) For the purposes of this section—

(a) goods may be treated as having been shipped from the Territory of Papua or the Territory of New Guinea if they have been shipped from either of those territories; and

(b) goods may be treated as having been shipped from Malawi, Rhodesia or Zambia if they have been shipped from any of those countries or from Lourenco Marques or Beira in Mozambique'.

*Declared preference countries, Customs Tariff.* 10.—(1.) The Minister may, by order published in the *Gazette*, declare that a country specified in the order is a declared preference country for the purposes of this Act.

(2.) An order under the last preceding sub-section has effect, or shall be deemed to have had effect, from and including such date (which may be a date earlier than the date of publication of the order in the *Gazette*) as is specified in the order.

(3.) The Minister may, by order, published in the *Gazette*, revoke an order under sub-section (1.) of this section.

(4.) An order under the last preceding sub-section has effect from and including such date (which shall not be a date earlier than the date of publication of the order in the *Gazette*) as is specified in the order.

(5.) Goods shall not be treated as the produce or manufacture of a declared preference country for the purposes of this Act unless, at the time the goods are entered for home consumption, the order under sub-section (1.) of this section in which the declared preference country is specified has effect or is deemed to have had effect.

Declared preference countries comprise:

Bahamas	Guyana, Republic of	Seychelles
Barbados	Honduras, British	Sierra Leone
Bermuda	Hong Kong	Singapore, Republic of
Brunei	Jamaica	Solomon Islands
Ceylon	Kenya	Protectorate, British
Cyprus	Leeward Islands	Tanzania
Falkland Islands and Dependencies	Malaysia	Tonga
Fiji	Maldives Islands	Trinidad and Tobago
Gambia	Malta	Uganda
Ghana	Mauritius and Dependencies	Virgin Islands, British
Gibraltar	Nigeria, Federation of	Windward Islands
Gilbert and Ellice Islands Colony	St. Helena	

*General rates.* General rates apply to goods from all countries which do not qualify for preferential rates of duty under a particular tariff classification.

*By-law provisions.* Customs By-laws and Ministerial Determinations are instruments made by the Minister for Customs and Excise under the authority of sections 271 to 273D of the Customs Act by which goods may be admitted free of duty or at rates of duty lower than those normally applicable. By-laws and determinations may only be made under a by-law classification, which is a tariff classification containing the words 'as prescribed by by-law'. Such a classification sets out the by-law duty rates which will apply to goods only when such goods are included in a by-law or determination made under that classification. A prerequisite for by-law admission is that suitably equivalent goods be not reasonably available from Australian production. A by-law covers goods by general description with no limit on quantity and may be used by any importer of the goods. A determination generally covers a specific quantity of particular goods and may be used only by the importer mentioned in the determination.

*Primage duties.* In addition to the ordinary duties of customs imposed by the Customs Tariff, *ad valorem* primage duties at rates of five per cent or ten per cent are charged on some goods according to the types of goods and origin thereof. Other goods are exempt from primage duty. Goods the produce or manufacture of New Zealand, Norfolk Island, Fiji, Cocos (Keeling) Islands, Christmas Island, and Papua New Guinea are exempt from primage duty.

*Anti-dumping duties.* The *Customs Tariff (Dumping and Subsidies) Act 1961-1965* provides protection for Australian industry against various forms of unfair trading. Under this Act dumping duty may be imposed on goods that are sold to Australian importers at a price which is less than the normal value of the goods, where this causes or threatens not insubstantial injury to an Australian industry. 'Normal value' under the Act means:

- (a) fair market value in the country of export;
- (b) price in the country of export to a third country;
- (c) fair market value in a third country; or
- (d) cost of production, plus f.o.b. charges, plus selling costs and profit.

The amount of dumping duty is the difference between the normal value and f.o.b. export price.

Countervailing duty may be levied on goods in respect of which any subsidy, bounty, reduction or remission of freight, or other financial assistance has been, or is being, paid or granted directly or indirectly upon the production, manufacture, carriage or export of those goods. The amount of the countervailing duty in respect of any goods is a sum equal to the amount of the subsidy, bounty, reduction or remission of freight or other financial assistance.

#### **Import controls—Customs (Import Licensing) Regulations**

A comprehensive system of import licensing was introduced in Australia at the beginning of the second World War under the authority of the Customs (Import Licensing) Regulations. Following the gradual relaxation of the restrictions from the end of the War, import licensing was reimposed on 8 March 1952 and continued in force until 18 October 1962. From that date restrictions were removed from all commodities with the exception of some goods retained under control or subsequently brought under control for reasons associated with the protection of Australian industry. The goods subject to import licensing control as at 1 January 1972 are broadly described as used, second-hand or disposal earthmoving and construction equipment and four-wheel drive vehicles; knitted coats, cardigans, sweaters and the like and men's and boys' knitted shirts. Further information on import controls is given in Year Book No. 51, page 492.

#### **Export controls and incentives**

*Export restrictions.* Section 112 of the Customs Act provides that the Governor-General may, by regulation, prohibit the exportation of goods from Australia and that this power may be exercised by: (a) prohibiting the exportation of goods absolutely; (b) prohibiting the exportation of goods to a specified place; and (c) prohibiting the exportation of goods unless prescribed conditions or restrictions are complied with. Goods subject to this export control are listed in the Customs (Prohibited Exports) Regulations.

*Exchange control—Banking Act 1959-1967.* As an integral part of the framework of exchange control, a control over goods exported from Australia is maintained under the provisions of Part III of the Banking (Foreign Exchange) Regulations, to ensure that the full proceeds of such goods are received into the Australian banking system and that these proceeds are received in the currency and in the manner prescribed by the Reserve Bank of Australia. This action is complementary to that taken under other parts of the Banking (Foreign Exchange) Regulations and under Part IV of the Banking Act to control the movement out of Australia of capital in the form of securities, currency and gold.

Export licences are issued subject to terms and conditions specified in the Banking (Foreign Exchange) Regulations, and may be subject to such further terms and conditions as are determined, or may be free from terms and conditions. On the receipt in Australia by the Reserve Bank, or by a bank acting as agent for that Bank, of advice that the foreign currency has been paid to the Reserve Bank or to an agent of the Bank in payment for goods exported in accordance with a licence granted under the regulations, the Bank, or an agent of the Bank, pays the licensee, or such other person as is entitled to receive it, an amount in Australian currency equivalent to the foreign currency received. In addition to commercial transactions involving exports, movements of personal effects are also controlled. Persons leaving Australia for overseas are required to obtain licences to cover their bona fide baggage, personal effects and household effects in any individual case where the gold content thereof exceeds \$1,000, or where jewellery and other articles of high intrinsic worth either exceed \$10,000 in value or those goods have not been the personal property of the passenger for at least twelve months.

*Export incentives.* The Commonwealth Government provides financial concessions as incentives to export. A special income tax allowance for export market development expenditure is designed to encourage firms to incur promotion expenditure in advance of export sales and to assist exporters and potential exporters to expand sales in existing markets and to enter new overseas markets. The allowance is in the form of a special deduction additional to the ordinary taxation deduction allowable in respect of specified expenses. Grants based on pay-roll tax are made to employers whose export sales of goods or property rights have increased above their average annual level in a base period. The grant is available in the first place to employers who are producers for export; but a producer for export may pass on grants to an employer who has supplied components embodied in the final product or to an export merchant.

### Trade descriptions

*The Commerce (Trade Descriptions) Act 1905–1966* gives power to require the application of a proper trade description to certain prescribed goods imported into or exported from Australia. Goods which must bear a prescribed trade description upon importation into Australia are specified in the Commerce (Imports) Regulations. As regards exports from Australia, marking requirements are prescribed in regulations issued under the Act and relating to specified export commodities.

## Government authorities

### Tariff Board

*The Tariff Board Act 1921–1971* provides for the appointment of a Tariff Board consisting of nine members. Of these, two must, and three may, be members of the Commonwealth Public Service at the time of their appointment (or first appointments in the case of re-appointments). Members of the Board are appointed for terms of not less than one year and not more than five years. The purpose of the Tariff Board is to advise the Government on matters relating to the protection and encouragement of Australian industry.

The Minister of State for Trade and Industry is required to refer to the Board for inquiry and report the following matters: the necessity for new, increased, or reduced duties; the necessity for granting bounties and the effect of existing bounties; and any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff or by the restriction of the importation of any goods by charging unnecessarily high prices for his goods or acting in restraint of trade. In addition, the Minister may refer the following matters to the Tariff Board for inquiry and report: the general effect of the working of the Customs Tariff and the Excise Tariff; the fiscal and industrial effects of the Customs laws on the Commonwealth; the incidence between the rates of duty on raw materials and on finished or partly finished products; and other matters affecting the encouragement of primary and secondary industries in relation to the Tariff. The Minister of State for Customs and Excise may refer to the Tariff Board for inquiry and report the following matters: the classification of goods in the Customs Tariff or Excise Tariff and matters in connection with the interpretation of these Tariffs; the question of the value for duty of goods; whether goods not prescribed in departmental by-laws should be so prescribed; and any matters in respect of which action may be taken under the *Customs Tariff (Dumping and Subsidies) Act 1961–1965*.

Where a matter of the necessity for new or increased duties on any goods has been referred to the Board for inquiry and report, the Board may, in its report, recommend the restriction of the importation of those goods for such period as is specified in the report.

Inquiries conducted by the Board relating to a revision of the Tariff, a proposal for a bounty, a question under the Customs Tariff (Dumping and Subsidies) Act, or any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff or by the restriction of the importation of any goods, are held in public, and evidence in such inquiries is taken in public on oath, unless the Board accepts evidence as confidential or in the form of a written statement by a witness on oath. The Board is required to make available to the public the contents of any such written statement except any matter which it accepts as confidential.

### Special Advisory Authority

The Minister for Trade and Industry may also request a Special Advisory Authority to inquire into cases where urgent action appears necessary to protect an Australian industry against import competition pending receipt and consideration of a full report by the Tariff Board. The Special Advisory Authority's report must be submitted to the Minister within thirty days of the making of the request. Temporary protection recommended by a Special Advisory Authority may be imposed, but may only operate for a period of up to three months after the date of receipt of the final report by the Tariff Board on the goods concerned.



## Trade agreements

### Multilateral—General Agreement on Tariffs and Trade

The General Agreement on Tariffs and Trade (G.A.T.T.), which came into force on 1 January 1948, is a multilateral trade treaty designed to facilitate trading relations between participating countries by reducing tariff and other barriers to the free interchange of goods. The Agreement provides a framework within which negotiations can be held to reduce barriers to trade, and a structure for embodying the results of such negotiations in a legal instrument. Features of the Agreement are the schedules of tariff concessions participating countries have negotiated with each other, the application of most-favoured-nation tariff treatment among the participants, the avoidance of other trade discrimination, and a code of agreed commercial policy rules for international trading. Each participating country retains the right (a) to impose new or increased duties for protective purposes, except in respect of particular products where rates of duty have been bound against increase in negotiations under the Agreement; (b) by negotiation to modify or withdraw concessions formerly agreed; (c) to impose import restrictions to protect the balance of payments; (d) to take emergency action where any industry is endangered by reason of any obligation incurred under the Agreement.

There have been six main tariff negotiations under the provisions of the Agreement, and a number of smaller scale negotiations preceding the accession of individual countries. As a result the tariff rates for a great many items entering into world commerce have been reduced and/or bound against increase. Australia has obtained tariff concessions from individual countries on a number of its principal or potential exports to them, as a result both of direct negotiation by Australia and of negotiation by other countries. In the latter case the benefits occurred through the operation under the Agreement of the most-favoured-nation principle. The latest series of trade negotiations, the Kennedy Round, was based on a plan for linear tariff cuts by industrial countries on all industrial products, with a minimum of exceptions, and on the reduction of non-tariff barriers to trade and the creation of acceptable conditions of access to world markets for agricultural products. It concluded in June 1967 after three years of negotiations. Concessions were negotiated on trade valued at over \$36,000 million. The average reductions in tariffs on industrial goods was roughly one-third, while in agriculture the most important item was the agreement reached on the basis for a new world grains arrangement. Overall results were substantial, but were unevenly spread in that efforts to reduce trade barriers were very much more successful for manufactures than for primary products. In the post-Kennedy Round period, therefore, Australia is placing particular emphasis on the work of the Committee on Agriculture, created in November 1967, to examine the problems in the agricultural sector.

Up to the end of 1971 the contracting parties had held twenty-seven sessions, nearly all in Geneva, to deal with matters arising from the administration of the Agreement. As a general rule the contracting parties meet once a year, although in a few instances they have met twice. In 1960 a Council of Representatives was established to undertake work, both of an urgent and of a routine character, between the regular sessions of the contracting parties. Some of the provisions of the Agreement were revised in 1954 and 1955. The revised Agreement contains tighter provisions on non-tariff barriers to trade, and allows more freedom for countries to revise individual tariff items which had been bound against an increase in tariff negotiations under the Agreement.

Since G.A.T.T. has not been accepted definitively by any country except Haiti, the Agreement is at present being applied provisionally pursuant to a Protocol of Provisional Application. On 1 January 1972, eighty countries, whose foreign trade represents well over eighty per cent of the total volume of world trade, were full contracting parties to the Agreement, one had acceded provisionally, and fifteen applied the Agreement on a *de facto* basis.

Increasing attention has been focused in G.A.T.T. on specific trade and development problems of developing countries, and in February 1965 a new Part IV of G.A.T.T., aimed at helping developing countries solve these problems, was introduced on a *de facto* basis. It entered legally into force in June 1966. The new Part IV embodies commitments to individual and joint action by contracting parties, aimed at ensuring that the developing countries can increasingly find the means to raise standards of living and promote rapid economic development through participating in international trade and achieving sustained growth of their export earnings.

As a means of helping to offset the competitive disadvantages faced by the new industries of the developing countries, and of putting these countries in a better position to compete with major industrial countries in the Australian market, Australia formulated in 1965 a system of tariff preferences for developing countries on a range of manufactured and semi-manufactured products, all of which had been nominated by developing countries as being of export interest to them. It was recognised that Australia's initiative might well give a lead to other countries which might wish to use preferences to assist developing countries, and so lead to a compounding of the benefits to the

developing countries. Before the Australian system could be introduced, it was necessary to obtain a waiver from the G.A.T.T. 'no-new-preference' provisions. Such a waiver was granted at the end of March 1966 and the first preferences for developing countries became effective in April 1966. The Australian system has been extended in scope from time to time and is successfully stimulating imports of the products concerned from developing countries. Features of the system are that it is non-reciprocal (in that Australia seeks nothing in return), that it contains safeguards for Australian industries and for the interests of third countries, and that it is subject to international supervision through the G.A.T.T.

### **Bilateral agreements**

*Britain.* The original United Kingdom/Australia Trade Agreement (Ottawa Agreement) came into effect on 20 August 1932. The provisions and history of the Agreement were published in Year Book No. 43, page 329. The present Agreement, the United Kingdom/Australia Trade Agreement (U.K.A.T.A.) arose from the re-negotiation of the Ottawa Agreement to correct an imbalance which had developed in Britain's favour. It came into effect on 9 November 1956 and superseded the Ottawa Agreement. (See also Year Book No. 51, page 495.)

Briefly, U.K.A.T.A. provides for duty-free access for most products and preferences on a range of Australian products imported into Britain, in return for commitments with regard to the setting of tariff levels and preferential tariff treatment for British goods imported into Australia. This Agreement was initially negotiated for a five-year period with provision for re-negotiation thereafter. However, re-negotiation has been deferred since 1961 because of Britain's attempts to join the European Economic Community.

Either government may terminate the Agreement at six months notice. Should Britain join the E.E.C. on 1 January 1973 under the terms of the Treaty of Accession the present Agreement will of necessity have to be terminated.

In July 1971 Britain introduced import levy schemes on beef and veal, cereals and milk products other than butter and cheese, and import duties on mutton and lamb. The imposition of levies would be in breach of Britain's obligations to grant duty-free entry for imports into Britain from Australia. Following consultations, Australia agreed to waive its rights under U.K.A.T.A. to the extent necessary to allow Britain to introduce the schemes. In return, Britain waived its rights to the extent necessary to permit Australia to take measures to restore the balance of advantages under U.K.A.T.A., following introduction of the schemes and after consultations with Britain as to their effects.

There are also import levy systems for eggs and poultry meat imported into Britain.

*Canada.* The existing agreement between Australia and Canada came into force on 30 June 1960, replacing an agreement signed on 3 August 1931. The Agreement provides for Australian goods to receive British Preferential Tariff rates, or better, upon entry into Canada, and for Canada to maintain margins of preference in favour of Australia on a range of commodities. The agreement specifies that Canadian goods, with some exceptions, shall receive the benefit of the British Preferential Tariff upon importation into Australia and that Australia shall maintain margins of preference in favour of Canada on a range of commodities. The agreement continues subject to six months notice.

*New Zealand.* The New Zealand/Australia Free Trade Agreement came into force on 1 January 1966. The agreement provides for free trade in certain scheduled goods. Provision is made for the addition of items to the schedule. The provisions of the 1933 Trade Agreement between Australia and New Zealand continue in force as part of the Free Trade Agreement, except as superseded or modified by it.

*Rhodesia.* A trade agreement was negotiated with the Federation of Rhodesia and Nyasaland in June 1955 and, following the dissolution of the Federation on 31 December 1963, was continued on a provisional basis with each of the three constituent territories Zambia, (Northern Rhodesia) Rhodesia (Southern Rhodesia) and Malawi (Nyasaland). Zambia terminated the Trade Agreement with Australia on 30 June 1966 and the Agreement between Malawi and Australia lapsed on 1 January 1967. Following the unilateral declaration of independence by the Rhodesian Government in November 1965 the trade agreement became inoperative.

*Malaysia.* A trade agreement with the then Federation of Malaya became effective in August 1958. Under the agreement Malaya undertook to protect Australian wheat and flour from dumped or subsidised competition and to extend to Australia any tariff preferences it accords. Australia guaranteed free entry for natural rubber so long as the Papua New Guinea crop was absorbed, and assured the Federation that natural rubber would not be at a disadvantage compared with synthetic rubber in respect of tariff or import licensing treatment. The Agreement continues to apply between Australia and that portion of Malaysia known previously as the Federation of Malaya.



*Japan.* An Agreement on Commerce between the Commonwealth of Australia and Japan was signed on 6 July 1957, and formally ratified on 4 December 1957. It was provided that the Agreement would remain in force until 5 July 1960, and thereafter unless prior notice of termination should be given by either Government. The agreement provides that each country shall extend most-favoured-nation treatment to the other in respect of customs duties and similar charges, and import and export licensing. Japan is not entitled to claim the benefit of preferences accorded by Australia to Commonwealth countries and dependent territories. Japan also gave certain specific commitments on some important Australian export commodities.

Following a review of the agreement, a Protocol of Amendment was signed on 5 August 1963 and formally ratified on 27 May 1964. Under the Protocol Australia agreed to withdraw action against Japan under Article XXXV of the General Agreement on Tariffs and Trade, and thus a full G.A.T.T. relationship was established between the two countries.

The specific undertakings agreed in 1957 lapsed and the following commitments were entered into.

Japan has:

- (a) undertaken not to accord less favourable import treatment (apart from tariff) for raw wool than for raw cotton,
- (b) stated that it has no present intention of imposing a duty on wool,
- (c) undertaken to continue imports of Australian soft wheat at a stabilised level, and to purchase Australian hard wheat\* when necessary requirements are met,
- (d) stated that it will endeavour to expand opportunities for imports into Japan of Australian sugar, canned meat, leather, motor vehicles, butter, and cheese.

Australia has:

- (a) undertaken to consult Japan on temporary protection cases affecting Japanese products (in such consultations Japan will consider whether the need for temporary protection can be obviated by measures taken in Japan),
- (b) stated that equal opportunities of fair and equal competition are accorded to Japanese products in Australian Government purchases overseas.

The new agreement became effective for three years from the date of ratification (27 May 1964) and thereafter subject to three months' notice of termination by either Government.

*Indonesia.* This agreement came into operation on 1 July 1959. It records the desirability of expanding trade between Australia and Indonesia. It also gives special recognition to the importance of the flour trade from Australia to Indonesia. Australia recognises the importance to Indonesia of its traditional exports to Australia.

*Philippines.* A trade agreement with the Philippines was signed in Manila on 16 June 1965. The agreement provides for an exchange of non-discriminatory treatment† while recognising existing preferences. The agreement operated for one year initially and will continue until one Government gives ninety days' notice of its intention to terminate it. The Philippines is not a member of G.A.T.T.

*Korea.* On 21 September 1965 a trade agreement was signed in Seoul between Australia and South Korea. Basically the agreement provides for an exchange of non-discriminatory treatment with allowances for existing preferences. The agreement ran for one year initially but has provision for automatic extension. Both Governments undertook to use their best endeavours to increase the volume of trade between the two countries.

*Republic of China (Taiwan).* On 22 April 1968 a trade agreement was signed in Canberra between Australia and the Republic of China. The agreement provides for an exchange of most-favoured-nation tariff treatment while recognising existing preferences. The agreement operated for one year initially and continues thereafter unless one government gives ninety days' notice of its intention to terminate it. The Republic of China is not a member of G.A.T.T.

*Eastern Europe.* Australia has signed trade agreements with six East European countries: U.S.S.R. (15 October 1965), Poland (20 June 1966), Bulgaria (22 June 1966), Romania (18 May 1967), Hungary (5 December 1967) and Yugoslavia (21 July 1970).

These agreements provide basically for mutual exchange of most-favoured-nation treatment with provision for consultation on request by either party.

\* 'Soft' wheat is fair average quality wheat; 'hard' wheat is premium grade wheat similar to that grown in North America. † An agreement, with reservations, not to discriminate against each other with tariff or non-tariff barriers.



Australia's trade agreement with Czechoslovakia which was signed in 1936 is still in force. The original provisions of this agreement have been very largely superseded by both countries' membership of the G.A.T.T., and the agreement, in effect, is an affirmation of mutual most-favoured-nation exchange.

## Trade services

### Trade Commissioner Service

The stimulation of interest abroad in Australia's exports is an important government activity in which the Australian Trade Commissioner Service plays a prominent part. A brief account of the establishment and growth of the Trade Commissioner Service before the 1939-45 War is available in Year Book No. 51, page 496. Since the War the service has increased steadily, and by early 1972 there were 150 Trade Commissioners and Assistant Trade Commissioners in forty-nine posts in thirty-six countries.

Trade Commissioners are responsible for commercial intelligence in their territories. Particular facilities provided for Australian exporters and export organisations include: surveys of market prospects; advice on selling and advertising methods; arranging introductions with buyers and agents; providing reports on the standing of overseas firms; advice and assistance to business visitors; helping to organise and carry through trade missions, trade displays, newspaper supplements, and other promotion and publicity media; providing information on import duties, import licensing, economic conditions, quarantine and sanitary requirements, and other factors affecting the entry and sale of goods; helping to attract desirable investment.

In some countries Trade Commissioners also participate in inter-governmental negotiations in the economic and commercial fields. In certain countries where there is no diplomatic or consular mission Trade Commissioners are called upon to act as the Australian representative.

Trade Commissioners and Assistant Trade Commissioners are drawn from either private enterprise or the public service, and applications for entry into the Service are invited periodically by public advertisement. Recruitment is generally at the Assistant Trade Commissioner level and persons selected are promoted to Trade Commissioner as experience and performance warrant. In the majority of posts the Trade Commissioner is supported by an Assistant Trade Commissioner.

The Trade Commissioner Service is administered by the Commonwealth Department of Trade and Industry (as distinct from the diplomatic and consular services administered by the Department of Foreign Affairs), but in countries where there is an Australian diplomatic or consular mission it is the practice for Trade Commissioners to be attached to the mission and to hold an appropriate diplomatic or consular rank (Commercial Counsellor, Commercial Secretary or Commercial Attaché).

The overseas trade representation is shown in the chapter International Relations.

### Trade Missions

Since 1954 the Australian Government has sent a number of trade missions abroad as part of the campaign to increase exports. The experience acquired has indicated the need for flexibility in techniques to suit particular products or markets. At present the following types of trade missions are in use.

*Survey missions.* These are organised to obtain precise knowledge about the export trade potential for specific products in an overseas market. Such methods are used to explore export prospects in new or developing areas where commercial intelligence is not readily available or where a complex industry is involved and the industry requires special export knowledge.

*Specialised and general trade missions.* Arrangements are made for specific industries or groups of firms representing a number of industries to participate in a planned selling campaign in overseas markets with known sales potential. The mission visits the market, publicises its products and negotiates sales.

Up to the end of 1971 Australia has sent overseas sixty-three trade and survey missions and five trade ships.

### Trade displays, fairs, exhibitions and store promotions

Since 1949, Australia has participated in numerous major trade fairs, exhibitions and displays in Africa, Asia, Europe, the Americas and the Pacific Area.

Initially the emphasis was on participation in general trade fairs directed at the public and the general commercial community. With the development of export promotion techniques and the greater diversity of goods available for export, greater emphasis is now being placed on individual Australian trade displays and participation in specialised trade shows directed almost entirely at the business community. In addition, display rooms in Trade Commissioner offices are currently in use in Singapore, Kuala Lumpur, Manila and Johannesburg.

### Export of consulting services

Australian professional consultants have been increasingly successful in obtaining overseas commissions and are contributing significantly to Australia's foreign exchange earnings.

The Australian Professional Consultants Council, consists of members of the Royal Australian Planning Institute, the Institute of Surveyors of Australia, the Royal Australian Institute of Architects, the Association of Consulting Engineers of Australia, the Institute of Quantity Surveyors, the Institute of Agricultural Science and the Snowy Mountains Engineering Corporation. The Council assists the members of the professions concerned to obtain overseas commissions. The Council also acts as a liaison body for the government in its efforts to promote the export of consulting services.

Most opportunities for Australian professional consultants arise through development projects financed by international aid and lending organisations such as the International Bank for Reconstruction and Development, United Nations Development Programme and the Asian Development Bank.

However, Australian consultants are continuing to have significant successes in securing commissions from the private sector, particularly in South-East Asia.

### Export Payments Insurance Corporation

The Exports Payments Insurance Corporation was established by the Commonwealth Government in 1956 with the objective of encouraging exports by providing insurance against risks of non-payment of overseas accounts. The Corporation is charged to be self-supporting, i.e. over a period its income should be adequate to cover the expenses of operation and any payments of claims which may be incurred.

The main risks of loss against which the Corporation insures are the 'commercial' risks of the insolvency or protracted default of the buyer and 'political' risks. The latter include exchange transfer difficulties; the imposition of government regulations which prevent the import of the goods into the buyer's country; war, revolution or civil disturbance in the buyer's country. For most 'political' risks insurance cover is available to a maximum of 90 per cent of the amount of loss in the pre-shipment period and a maximum of 95 per cent in the post-shipment period. The rate of cover for 'commercial' risks is fixed at 90 per cent.

The Corporation may submit to the Government, for consideration in the national interest, applications for payment insurance which are commercially unacceptable to the Corporation. In considering such applications the Government takes account of both political and economic factors.

An amendment to the *Export Payments Insurance Corporation Act* 1956 in November 1964 gave E.P.I.C. the authority to issue guarantees of payments to commercial lending institutions on money raised for the purpose of financing exports. The existence of E.P.I.C. guarantees has facilitated the raising of finance by exporters.

In addition to providing the above facilities, the Corporation insures, on behalf of the Commonwealth Government, eligible Australian investments in overseas countries against the main non-commercial risks associated with investing overseas, e.g. expropriation, exchange transfer difficulties, and war damage. For an investment to be eligible it must confer benefits on both Australia and the investment host country. At 31 December 1971, 78 policies had been written for 21 investments mainly in South-East Asia. The face value of these policies was \$45 million.

Since the first policy was issued in September 1957, Australian exporters have made increasing use of the facilities of E.P.I.C. At 31 December 1971 the Corporation had 960 policies current on its commercial account (i.e. not including Government business) with a face value of over \$542 million. The majority of transactions have been on a short or medium term basis using a supplier credit facility (i.e. insured credit being extended to the overseas buyer by the exporter with the financial support of private lending institutions). The Corporation has issued policies covering exports to 150 countries and has insured a wide range of Australian exports.

In 1971 E.P.I.C. was authorised to extend its guarantee facility to credit made available by lending institutions direct to the overseas buyer. The new facility is known as buyer credit and is intended to cater for the export of capital goods on extended repayment terms. It is designed to supplement supplier credit and thus widen the range of facilities available to Australian exporters.

A Consultative Council, composed of eight leading figures in the fields of banking, commerce, and industry, and two Government members advises the Corporation on its activities. The council meets two or three times a year and is appointed for a term of three years.

Further information on the Corporation is contained in Year Book No. 49, page 544. For particulars of its operations see Chapter 17, Private Finance of this Year Book.

## Collection and presentation of statistics

### Basic documents

Overseas trade statistics are compiled by the Commonwealth Bureau of Census and Statistics from copies of export and import entries submitted by exporters and importers or their agents to the Department of Customs and Excise as required by the Customs Act. The entries show the port of shipment and country of consignment for exports, and port of entry and country of origin for imports, the date, the description, quantity where required, the value (f.o.b.) of the goods, and for imports, the amount of duty paid thereon. The export statistical item number is inserted by the exporter or his agent; the importer or his agent is required to insert the Tariff item number under which the goods are admitted and the statistical key code. These are verified by officers of the Department of Customs and Excise in the local offices of the Collectors and Sub-collectors of Customs.

### Scope of the statistics

Overseas trade statistics are not confined to goods which are the subject of a commercial transaction and all goods moving into or out of Australia are recorded, except for those exclusions listed below. Among the items included are:

- (a) Exports and imports on government account including some items of defence equipment.
- (b) Outside packages (i.e., the outside package or outside covering of the goods) are included as a separate item in the tabulation of imports, but in exports the value recorded for each item includes the value of the outside package.

### Exclusions

- (a) Direct transit trade, i.e. goods being transhipped or moved through Australia for purposes of transport only.
- (b) Bunkers and stores supplied to vessels and aircraft. (However, a separate 'Ships' Stores' collection is made and details are shown on page 312.)
- (c) Those migrants' and passengers' effects for which a customs entry is not received.
- (d) Those parcel post exports and imports of small value for which customs entries are not received.
- (e) Certain materials for intergovernmental defence projects for which customs entries are not required.
- (f) The value of ores and concentrates exported and imported includes the value of the gold content and the gold content is therefore not included in exports and imports of gold.
- (g) Vessels and aircraft engaged in the transport of passengers or goods between Australia and other countries.
- (h) Vessels and aircraft purchased for use on overseas routes and any subsequent sales made of such vessels and aircraft.
- (i) Fish and other sea products landed abroad directly from the high seas by Australian vessels.

### Areas applying

The area to which all overseas trade statistics issued by this Bureau apply is the whole of the Commonwealth of Australia, comprising the States of New South Wales, Victoria, Queensland, South Australia, Western Australia, and Tasmania, the Northern Territory and the Australian Capital Territory. Non-contiguous territories under Australian administration are treated as outside countries and trade transactions between Australia and those non-contiguous territories are part of the overseas trade of Australia. Such transactions are shown separately, i.e. the trade of Australia with each particular area is separately recorded and tabulated.

### Period covered by the statistics

*Exports and imports* are recorded statistically in the month in which the entries are passed by the Department of Customs and Excise. Normally this is within a few days of loading or discharge of cargo, although delays sometimes occur in the lodging of entries. Because of the distances involved entries from outlying ports are, for statistical purposes, terminated on the 21st of the month.

### Containerised goods

Containerised goods forwarded interstate for export through a container terminal are statistically recorded as being exported from the port of location of the Customs House at which the entry was lodged and not from the port of loading in Australia. For example, containerised goods for which entries were lodged at the Customs House, Port Adelaide but forwarded interstate to Port Melbourne for export would be recorded statistically as exports from Port Adelaide, hence from South Australia and not Victoria. The same method of recording applies to imports of containerised goods forwarded interstate following discharge from an overseas vessel.



### Valuation

Commencing with the Bureau publications issued at the close of 1965 values in overseas trade statistics have been expressed in \$A. Prior to this values were expressed in £ (Aust.) except for imports into Australia which, up until 15 November 1947, were recorded in British currency values. Full explanatory notes on the methods of recording import values before and since 15 November 1947 were included in Year Book No. 37, page 396.

All values in overseas trade statistics are determined on a 'free on board (f.o.b.) port of shipment' basis. This means that all charges (in particular the cost of freight and insurance) incurred after the goods have been exported from the port of shipment are excluded. Only transport and service charges incurred, or usually incurred, prior to export are included in the determination of trade values.

The procedure adopted to value exports and imports is as follows:

**Exports.** The recorded value of goods exported includes the cost of outside packages and has been determined, since July 1937, as follows.

- (a) Goods sold to overseas buyers before export are valued at the Australian f.o.b. port of shipment equivalent of the actual price at which the goods were sold.
- (b) Goods shipped on consignment are valued at the Australian f.o.b. port of shipment equivalent of the price paid for similar goods of Australian origin in the principal markets of the country to which they are despatched for sale.

An account of the bases of valuation in operation prior to July 1937 is given on page 396 of Year Book No. 37.

**Imports.** The recorded value of goods imported is the amount on which duty is payable or would be payable if the duty were *ad valorem*. Value for duty of any goods shall be the sum of (a) and (b) below, i.e.:

(a) the higher of—

- (i) the actual money price paid or to be paid for the goods by the Australian importer plus any special deduction ('special deduction' is defined as any discount or other deduction allowed to the Australian importer which would not ordinarily have been allowed to any and every purchaser at the date of exportation of an equal quantity of identically similar goods); or
- (ii) the current domestic value of the goods ('current domestic value' is defined as the amount for which the seller of the goods to the purchaser in Australia is selling or would be prepared to sell for cash, at the date of exportation of those goods, the same quantity of identically similar goods to any and every purchaser in the country of export for consumption in that country);

and

- (b) all charges payable or ordinarily payable for placing the goods free on board at the port of export.

In the case of goods consigned for sale in Australia the 'Value for duty' shall be the amount which would be the value for duty if the goods were, at the date of exportation, sold to an Australian importer instead of being consigned for sale in Australia.

**Leasing arrangements.** The recorded value of goods exported, or imported under leasing arrangements is defined as the free on board value, i.e. not the value of the lease receipts or payment. However, for balance of payments purposes, large items of equipment under lease are normally excluded from export and import figures and, therefore, from the balance of trade since no change of ownership has occurred.

### Quantity data

Where quantities are shown they are generally, but not invariably, expressed in terms of the normal trade unit. Where 'cental' is used, the unit is equivalent to 100 lb avoirdupois. Quantities are not tabulated in respect of statistical items for which there is no appropriate unit of quantity (for example, a statistical item which covers a number of commodities that cannot be recorded under a uniform unit of quantity).

### Statistical concepts of trade

**Trade systems.** There are two generally accepted systems of recording overseas trade statistics defined by the Statistical Office of the United Nations, that is 'special trade' and 'general trade'. The definitions for these are shown in Year Book No. 57 and earlier issues. This terminology is not usually employed in connection with Australian overseas trade statistics and the terms defined below are in customary use.

**Exports of Australian origin** are goods, materials or articles which have been produced, manufactured or partly manufactured in Australia, except goods which were originally imported and have undergone only repair or minor operations which leave them essentially unchanged.

*Re-exports* are goods, materials or articles originally imported which are exported either in the same condition in which they were imported or after undergoing repair or minor operations which leave them essentially unchanged. 'Minor operations' include blending, packaging, bottling, cleaning, sorting, husking and shelling.

*Total exports* are the aggregate of exports of Australian origin and re-exports.

*Import clearances* are imported goods cleared through Customs direct for domestic consumption plus goods cleared from bonded warehouses for domestic consumption (these are comparable to 'special trade').

*Imports* are the combined total of goods imported direct for domestic consumption and imports into bonded warehouses (these are comparable to 'general trade').

*Direct transit trade*, i.e. goods being transhipped or moving through the country for purposes of transport only, is excluded from overseas trade statistics.

*Merchandise and non-merchandise trade.* Total trade is divided into merchandise and non-merchandise trade. Merchandise trade is the equivalent of total exports and imports less certain items specified as non-merchandise. Since July 1965 merchandise and non-merchandise trade have been defined in accordance with international standards recommended by the United Nations. A complete description of the commodities included is contained in the *Australian Export and Import Commodity Classifications* (8.3, 8.6) published by the Bureau of Census and Statistics.

*Excess of exports or imports.* The excess of the value of exports or imports as shown on the basis of total trade in the tables on pages 297 and 310 does not represent the balance of trade. The balance of trade is derived by comparing statistics of exports on a balance of payments basis with statistics of imports on that basis.

*Balance of trade.* Statistics of the balance of trade for balance of payments purposes are derived by making certain adjustments, relating both to scope and valuation to statistics of merchandise exports and imports. Statistics on the adjusted basis are published in statistical bulletins relating to the balance of payments. The adjustments include the following: imports are adjusted for the overall excess of recorded value for duty over the actual selling price to the importer; exports and imports of goods for repair and return, and the value of repairs are deducted from merchandise trade; exports and imports of ships and aircraft for use on overseas routes, certain imports of defence equipment, and other trade items for which customs entries are not required are added. Adjustments are also made for timing differences between the change of ownership and the lodgment of import entries in the case of certain large items of equipment (e.g. warships).

#### **Balance of payments**

Estimates of the balance of trade do not measure Australia's total balance of payments which includes other transactions such as freight and insurance charges on imports, shipping expenditure in Australian ports, overseas travel, payments of profits and interest, and private and government borrowing overseas. Estimates of these transactions will be found in the section relating to balance of payments on page 322.

#### **Country of consignment or origin**

'Country of consignment' referred to in export tables means the country to which goods were consigned at the time of export. Where the country of consignment is not determined at the time of export the goods are recorded as exported 'For orders'. 'Country of origin' referred to in import tables means the country of production. Classification of imports according to country of shipment was discontinued after the year 1920-21. A brief account of the dual system of import classification by country operating prior to the year 1921-22 is given on page 500 of Year Book No. 51.

#### **Commodity classifications**

From July 1965 imports have been classified according to the Australian Import Commodity Classification and from July 1966 exports have been classified according to the Australian Export Commodity Classification. Prior to those years the statistics were based on the Statistical Classification of Exports and Imports. The new classifications are based on the Standard International Trade Classification, Revised (S.I.T.C.), which is closely related to the Brussels Tariff Nomenclature used in the Australian Customs Tariff introduced in July 1965.

#### **Pre-federation records**

In the years preceding federation each State recorded its trade independently and in so doing did not distinguish other Australian States from external countries. The aggregation of the records of the several States is necessarily the only available means of ascertaining the trade of Australia for comparison with later years, but the results obtained are subject to error, since past records of values and the direction of exports and imports were not on uniform lines. Exports and imports for years prior to federation may be found in early issues of the Year Book, particularly Year Book No. 2. On the introduction of the *Customs Act* 1901 the methods of recording values were made uniform throughout the States.

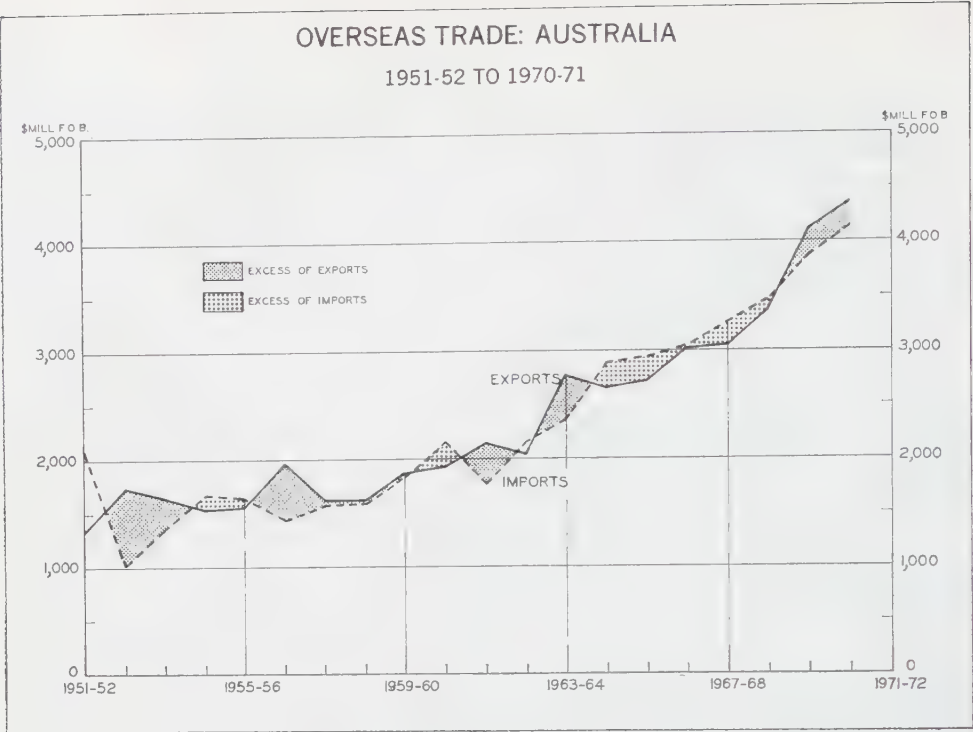


PLATE 26

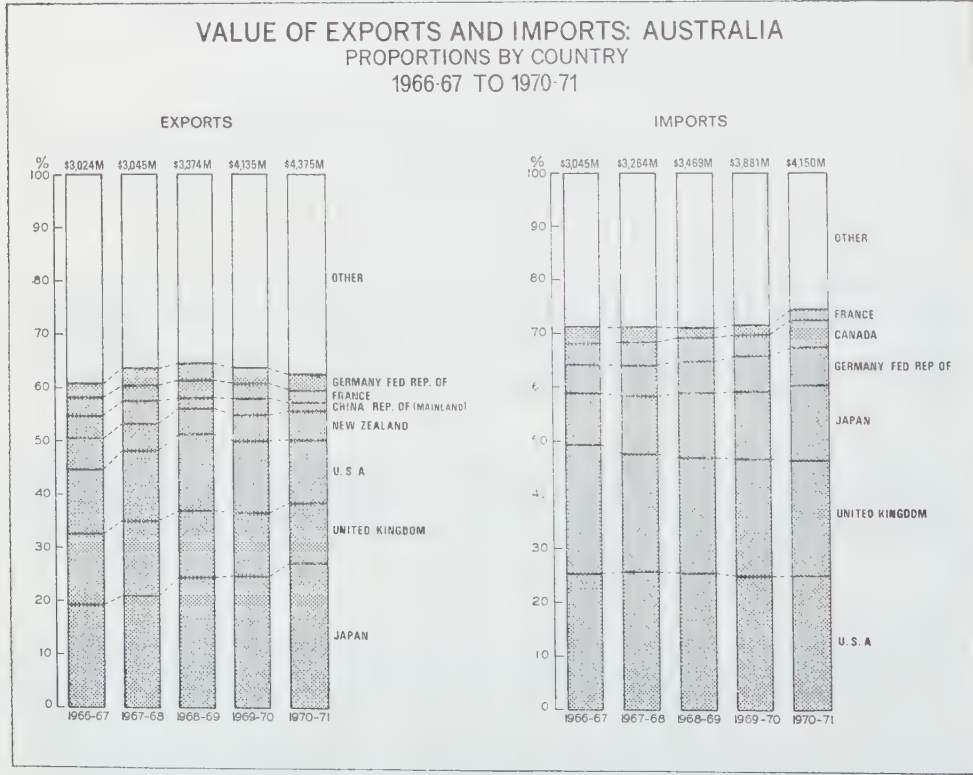


PLATE 27



## Total overseas trade

The following table shows the total trade of Australia with overseas countries from 1901 to 1970-71. The period 1901 to 1970-71 has been divided into five-year periods, and the figures shown represent the annual averages for the periods specified. Figures for the individual years were published in earlier issues, but figures for imports in issues prior to No. 37 were expressed in British currency.

OVERSEAS TRADE: AUSTRALIA, 1901 TO 1970-71  
(f.o.b.)

Period	Exports	Imports	Excess of exports (+) or imports (-)	Value per head of population	
				Exports	Imports
Annual average—	\$m	\$m	\$m	\$	\$
1901 to 1905 . . . . .	102	71	+ 31	26.2	18.2
1906 to 1910 . . . . .	(a)139	94	+ 45	32.6	22.0
1911 to 1915-16 . . . . .	149	133	+ 16	30.8	27.6
1916-17 to 1920-21 . . . . .	230	183	+ 47	43.8	34.8
1921-22 to 1925-26 . . . . .	269	249	+ 20	45.8	42.2
1926-27 to 1930-31 . . . . .	263	239	+ 24	41.0	37.2
1931-32 to 1935-36 . . . . .	242	148	+ 94	36.2	22.2
1936-37 to 1940-41 . . . . .	315	247	+ 68	45.4	35.6
1941-42 to 1945-46 . . . . .	328	423	- 95	44.8	58.2
1946-47 to 1950-51 . . . . .	1,143	899	+244	145.4	114.3
1951-52 to 1955-56 . . . . .	1,572	1,566	+ 6	176.4	175.6
1956-57 to 1960-61 . . . . .	1,811	1,729	+ 82	182.0	173.7
1961-62 to 1965-66 . . . . .	2,492	2,430	+ 62	224.8	218.6
1966-67 to 1970-71 . . . . .	3,591	3,562	+ 29	293.4	291.4
Year—					
1966-67 . . . . .	3,024	3,045	- 21	258.3	260.1
1967-68 . . . . .	3,045	3,264	-220	255.3	273.7
1968-69 . . . . .	3,374	3,469	- 94	277.2	285.0
1969-70 . . . . .	4,135	3,881	+254	332.3	312.1
1970-71 . . . . .	4,375	4,150	+225	343.7	326.0

(a) Prior to 1906, ships' stores were included in exports. For value of such goods loaded on overseas vessels and aircraft during each of the years 1968-69 to 1970-71, see page 312.

Plate 26 on page 296 shows the overseas trade of Australia from 1951-52 to 1970-71.

The following table shows particulars of merchandise and non-merchandise trade for each of the years 1966-67 to 1970-71.

MERCHANDISE AND NON-MERCHANDISE TRADE: AUSTRALIA, 1966-67 TO 1970-71  
(\$'000 f.o.b.)  
EXPORTS

Year	Merchandise			Non-merchandise			Total
	Australian produce	Re-exports	Total	Australian produce	Re-exports	Total	
1966-67 . . . . .	2,872,396	62,176	2,934,572	63,827	25,498	89,325	3,023,897
1967-68 . . . . .	2,861,812	73,388	2,935,200	73,344	36,132	109,476	3,044,675
1968-69 . . . . .	3,156,231	84,054	3,240,283	88,848	45,131	133,980	3,374,263
1969-70 . . . . .	3,866,895	130,990	3,997,885	97,146	40,269	137,415	4,135,300
1970-71 . . . . .	4,118,442	123,117	4,241,560	81,428	51,694	133,122	4,374,682

## IMPORTS

Year	Merchandise		Non-merchandise		Total
1966-67 . . . . .	3,003,973		41,368		3,045,341
1967-68 . . . . .	3,215,003		49,470		3,264,473
1968-69 . . . . .	3,423,276		45,229		3,468,505
1969-70 . . . . .	3,822,623		58,604		3,881,227
1970-71 . . . . .	4,098,605		51,468		4,150,073

### Classified summary of Australian overseas trade

The following table shows exports and imports according to divisions of the Australian Export and Import Commodity Classifications (based on the Standard International Trade Classification) during each of the years 1968-69 to 1970-71.

#### EXPORTS AND IMPORTS: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1968-69 TO 1970-71

(\$'000 f.o.b.)

Division No.	Description	Exports			Imports		
		1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
00	Live animals . . . . .	5,444	7,358	10,187	2,681	4,355	5,633
01	Meat and meat preparations . . . . .	285,800	417,909	428,535	1,044	2,288	1,415
02	Dairy products and eggs . . . . .	79,473	102,254	101,522	4,506	5,757	5,863
03	Fish and fish preparations . . . . .	37,025	39,107	55,878	30,677	33,368	42,025
04	Cereals and cereal preparations . . . . .	351,400	431,792	596,024	6,332	4,747	5,397
05	Fruit and vegetables . . . . .	96,757	94,102	107,040	21,311	23,855	25,437
06	Sugar, preparations, honey . . . . .	129,753	121,848	160,068	2,606	3,004	3,017
07	Coffee, tea, cocoa, and spices . . . . .	2,867	4,240	5,583	49,288	51,396	53,878
08	Feeding stuff for animals . . . . .	8,314	12,406	11,883	6,502	6,882	9,613
09	Miscellaneous food preparations . . . . .	3,420	3,500	3,554	2,853	4,199	5,451
11	Beverages . . . . .	7,363	7,623	9,819	15,464	16,469	20,483
12	Tobacco and tobacco manufactures . . . . .	2,374	2,982	4,770	28,362	31,975	29,649
21	Hides, skins and fur skins, undressed . . . . .	77,342	89,922	73,709	2,822	1,664	1,185
22	Oil seeds, oil nuts and oil kernels . . . . .	1,663	1,094	2,012	7,356	9,897	6,841
23	Crude rubber (including synthetic and reclaimed) . . . . .	768	806	1,345	27,837	30,111	23,218
24	Wood, timber and cork . . . . .	3,609	4,397	4,271	47,585	53,077	52,793
25	Pulp and waste paper . . . . .	370	411	458	26,410	36,550	38,448
26	Textile fibres and their waste . . . . .	800,420	768,802	549,648	33,101	33,815	37,031
27	Crude fertilisers and minerals ( <i>see also</i> Divisions 32 and 33) . . . . .	5,361	9,524	16,329	66,054	60,989	51,863
28	Metalliferous ores and metal scrap . . . . .	340,372	506,567	627,152	5,109	7,877	7,966
29	Crude animal and vegetable materials, n.e.s. . . . .	10,659	14,636	16,512	12,146	13,265	15,263
32	Coal, coke, and briquettes . . . . .	119,142	172,414	206,240	581	804	771
33	Petroleum and petroleum products . . . . .	26,426	27,722	41,623	251,185	254,390	188,844
34	Petroleum gases and other gaseous hydrocarbons . . . . .	(a)	(a)	(a)	31	45	48
41	Animal oils and fats . . . . .	12,118	24,836	27,725	777	893	1,177
42	Fixed vegetable oils and fats . . . . .	97	100	99	10,523	12,532	14,391
43	Animal and vegetable oils, fats and waxes, processed . . . . .	738	913	1,295	2,161	2,174	2,073
51	Chemical elements and compounds . . . . .	84,763	97,912	111,812	108,508	117,454	141,594
52	Mineral tar and crude chemicals from coal, petroleum and natural gas . . . . .	270	256	319	1,786	2,162	3,214
53	Dyeing, tanning and colouring materials . . . . .	8,410	8,472	8,880	19,046	22,364	25,254
54	Medicinal and pharmaceutical . . . . .	15,864	18,383	24,841	39,803	51,220	58,919
55	Essential oils and perfume materials; toilet and cleansing preparations . . . . .	4,580	6,104	7,511	14,289	16,505	18,281
56	Fertilisers, manufactured . . . . .	177	844	175	11,589	7,209	6,822
57	Explosives and pyrotechnic products . . . . .	2,267	2,436	3,167	4,586	4,922	6,668
58	Plastic materials, regenerated cellulose and artificial resins . . . . .	6,201	6,802	8,806	80,342	91,161	90,011
59	Chemical materials, n.e.s. . . . .	19,346	23,537	25,667	48,252	49,726	58,934
61	Leather, leather manufactures, n.e.s. and dressed fur skins . . . . .	6,500	5,652	5,670	6,145	7,332	6,282
62	Rubber manufactures, n.e.s. . . . .	7,606	12,127	9,943	37,040	41,995	59,815
63	Wood and cork manufactures (excluding furniture) . . . . .	2,817	2,559	4,960	14,373	15,391	17,273
64	Paper, paperboard and manufactures . . . . .	10,534	12,080	14,388	99,689	107,799	120,058
65	Textile yarn, fabrics, made-up articles . . . . .	15,882	18,909	23,873	263,400	287,324	301,698
66	Non-metallic mineral manufactures, n.e.s. . . . .	25,124	27,042	28,197	65,772	78,267	86,214
67	Iron and steel . . . . .	110,402	135,707	97,026	95,848	95,286	138,590
68	Non-ferrous metals . . . . .	181,069	284,112	277,116	26,088	24,515	27,783
69	Manufactures of metal, n.e.s. . . . .	31,380	42,466	55,446	79,286	94,650	109,437
71	Machinery, other than electric . . . . .	65,895	89,804	112,905	603,839	708,828	789,237
72	Electrical machinery and apparatus . . . . .	26,940	36,927	50,560	215,262	251,367	281,495
73	Transport equipment . . . . .	89,214	153,071	161,513	508,729	567,496	572,783
81	Sanitary, plumbing, heating and lighting fixtures and fittings . . . . .	1,431	1,769	2,327	4,648	5,664	6,139
82	Furniture . . . . .	1,297	1,355	1,720	4,911	5,463	6,314
83	Travel goods, handbags, etc. . . . .	166	293	220	5,052	5,740	6,650
84	Clothing and accessories; articles of knitted or crocheted fabric . . . . .	7,488	9,030	9,579	29,813	34,385	40,725
85	Footwear, gaiters and similar articles . . . . .	484	761	975	10,660	15,481	16,859
86	Professional, scientific and controlling instruments; photographic and optical goods, watches and clocks . . . . .	17,382	20,106	26,486	100,950	120,711	138,946
89	Manufactured articles, n.e.s. . . . .	20,661	23,765	32,259	142,100	162,218	187,743
9(A)	Commodities and transactions not classified according to kind(b) . . . . .	67,055	88,336	71,936	116,165	123,611	125,094
	<i>Total merchandise</i> . . . . .	3,240,283	3,997,885	4,241,560	3,423,276	3,822,623	4,098,605
9(B)	Non-merchandise . . . . .	133,980	137,415	133,122	45,229	58,604	51,468
	<i>Total</i> . . . . .	3,374,263	4,135,300	4,374,682	3,468,505	3,881,227	4,150,073

(a) Included in Division 9A. (b) includes Division 34 (Exports only).

## Exports of principal articles of Australian produce

## EXPORTS OF PRINCIPAL ARTICLES OF AUSTRALIAN PRODUCE, 1968-69 TO 1970-71

Article	Quantity			Value (\$'000 f.o.b.)		
	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
Meat, fresh, chilled or frozen—						
Of bovine animals—						
Beef—						
Bone-in . . . . .	'000 lb	7,218	29,490	71,302	3,045	9,068
Boneless . . . . .	"	548,768	681,602	663,114	204,247	277,858
Other . . . . .	"	8,561	11,810	13,176	3,720	5,202
Of sheep, lambs and goats . . . . .	"	234,349	394,159	386,783	45,711	81,747
Meat, canned or bottled . . . . .	"	36,628	37,715	47,801	10,062	10,318
Sausage casings (natural) . . . . .	"	..	..	..	5,350	8,211
Other meat (including poultry, game, rabbits) . . . . .	"	..	..	..	19,006	33,695
Milk and cream . . . . .	'000 lb	153,987	199,754	202,650	18,974	22,511
Butter . . . . .	"	165,501	218,164	196,758	40,523	52,459
Cheese . . . . .	"	56,096	90,037	80,380	13,872	19,570
Fish (including shell fish) fresh or preserved by cold process . . . . .	"	20,725	25,004	33,634	34,301	36,502
Wheat . . . . .	tons	4,813,574	6,777,309	8,931,577	258,334	337,570
Barley, unprepared . . . . .	"	443,551	622,318	1,105,234	18,246	22,766
Oats . . . . .	"	328,096	215,820	547,137	13,042	7,559
Flour (wheaten), plain white . . . . .	'000 lb	699,175	657,666	611,889	21,807	21,185
Fruit, dried—						
Grapes . . . . .	"	137,776	97,268	132,273	19,513	14,361
All other . . . . .	"	5,401	4,828	5,004	2,087	1,717
Fruit, canned or bottled . . . . .	"	311,061	293,417	326,840	37,842	37,230
Sugar, the produce of cane . . . . .	tons	2,029,177	1,364,307	1,546,434	122,214	116,120
Wine . . . . .	gallons	1,803,786	1,294,786	1,444,029	3,399	2,913
Hides and skins—						
Calf, cattle and horse . . . . .	'000 lb	119,866	143,079	158,489	17,592	21,917
Sheep and lamb (excl. pieces) . . . . .	'000	30,565	35,555	37,714	55,853	64,091
Timber, wood in the rough, shaped or simply worked . . . . .	super ft	17,622	24,834	24,980	3,026	4,241
Wool—						
Greasy . . . . .	'000 lb	1,467,938	1,569,546	1,433,040	717,014	683,545
Scoured or washed, carbonised, tops, noils and waste . . . . .	"	118,228	118,931	99,899	78,493	77,498
Iron ore concentrates (except roasted iron pyrites) . . . . .	tons	20,071,987	33,244,279	47,583,953	179,515	277,810
Copper ores and concentrates . . . . .	"	41,073	64,082	138,002	9,769	14,620
Lead ores and concentrates . . . . .	"	111,145	119,468	81,784	21,605	23,320
Zinc ores and concentrates . . . . .	"	334,817	430,216	377,424	22,235	30,503
Titanium and zirconium concentrates . . . . .	"	1,077,300	1,276,133	1,365,109	40,025	49,629
Coal . . . . .	"	13,814,749	17,344,788	18,689,195	117,103	164,330
Petroleum and petroleum products . . . . .	"	..	..	..	26,240	27,427
Tallow, inedible . . . . .	cwt	2,035,529	3,019,497	2,739,091	9,482	20,455
Leather (excl. leather manufactures) . . . . .	"	..	..	..	5,791	4,520
Lead and lead alloys, unworked . . . . .	cwt	4,919,311	6,670,659	6,032,503	65,523	105,956
Copper and copper alloys . . . . .	"	969,743	1,243,193	1,202,677	53,420	91,044
Zinc and zinc alloys . . . . .	"	2,311,239	3,045,450	2,693,401	27,291	38,736
Machinery and transport equipment . . . . .	"	..	..	..	125,126	207,235
Drugs and chemicals . . . . .	"	..	..	..	117,839	132,946
Paper, pulp and stationery . . . . .	"	..	..	..	15,310	17,743
Motor vehicles (new, assembled) . . . . .	No	7,202	13,255	16,897	11,828	21,374
All other articles . . . . .	"	..	..	..	629,704	766,439
<b>Total Australian produce . . . . .</b>				<b>3,245,079</b>	<b>3,963,941</b>	<b>4,199,870</b>



**Exports, by industrial group**

The following table provides an analysis of Australian exports for the years 1968-69 to 1970-71. This analysis is designed to show fluctuations in exports of Australian produce dissected according to the main industry of their origin, although any such classification is necessarily somewhat conventional.

**EXPORTS OF AUSTRALIAN PRODUCE, BY INDUSTRIAL GROUP**  
1968-69 TO 1970-71

<i>Industrial group</i>	<i>Value (\$'000 f.o.b.)</i>			<i>Proportion of value of exports of Australian produce (excluding gold) (per cent)</i>		
	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
<b>Agriculture, horticulture and viticulture—</b>						
Unprocessed . . . . .	350,384	435,885	597,698	10.8	11.1	14.3
Processed . . . . .	232,822	222,068	274,644	7.3	5.7	6.6
Total agriculture, etc. . . . .	583,206	657,953	872,342	18.1	16.8	20.9
<b>Pastoral—</b>						
Unprocessed . . . . .	1,069,544	1,175,913	974,100	33.2	29.9	23.3
Processed . . . . .	118,030	137,083	122,987	3.6	3.5	2.9
Total pastoral . . . . .	1,187,574	1,312,996	1,097,087	36.8	33.4	26.2
<b>Dairy and farmyard—</b>						
Unprocessed . . . . .	5,196	8,779	8,045	0.2	0.2	0.2
Processed . . . . .	77,681	100,985	99,609	2.4	2.6	2.4
Total dairy, etc. . . . .	82,877	109,764	107,654	2.6	2.8	2.6
<b>Mines and quarries (other than gold)—</b>						
Unprocessed . . . . .	440,513	647,551	754,359	13.7	16.5	18.0
Processed . . . . .	193,187	304,715	282,218	6.0	7.7	6.8
Total mines, etc. . . . .	633,700	952,266	1,036,577	19.7	24.2	24.8
<b>Fisheries—</b>						
Unprocessed . . . . .	38,066	39,707	53,190	1.2	1.0	1.3
Processed . . . . .	3,088	2,960	6,572	0.1	0.1	0.1
Total fisheries . . . . .	41,154	42,667	59,762	1.3	1.1	1.4
<b>Forestry—</b>						
Unprocessed . . . . .	315	507	630	..	..	..
Processed . . . . .	4,425	5,304	5,290	0.1	0.1	0.1
Total forestry . . . . .	4,740	5,811	5,920	0.1	0.1	0.1
<b>Total primary produce—</b>						
Unprocessed . . . . .	1,904,018	2,308,342	2,388,022	59.1	58.7	57.1
Processed . . . . .	629,233	773,115	791,320	19.5	19.7	18.9
Total primary produce . . . . .	2,533,251	3,081,457	3,179,342	78.6	78.4	76.0
<b>Manufactures . . . . .</b>	565,969	719,023	855,520	17.6	18.2	20.5
Refined petroleum oils . . . . .	25,560	26,731	40,080	0.8	0.7	1.0
Unclassified . . . . .	97,592	107,345	106,677	3.0	2.7	2.5
<b>Total Australian produce (excluding gold) . . . . .</b>	<b>3,222,373</b>	<b>3,934,555</b>	<b>4,181,619</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Re-exports (excluding gold) . . . . .	129,185	171,359	174,811	..	..	..
Gold exports . . . . .	22,706	29,385	18,251	..	..	..
Total value of recorded exports . . . . .	3,374,263	4,135,300	4,374,681	..	..	..

The items enumerated indicate how arbitrary is the line necessarily drawn between primary produce and manufactures in any classification of this kind. The value of processed primary products exported includes some element of value added by the simpler processes of manufacture, while the value shown for manufactures exported necessarily includes the value of raw materials (primary produce) used in those manufactures.

## Imports of merchandise, by economic class

The following table shows imports of merchandise into Australia during the years 1968-69 to 1970-71 classified according to economic classes of (i) purpose and (ii) degree of manufacture.

IMPORTS OF MERCHANDISE, BY ECONOMIC CLASS: AUSTRALIA  
1968-69 TO 1970-71

	Value (\$'000 f.o.b.)			Proportion of value of imports of merchandise (per cent)		
	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
PURPOSE						
Producers' materials for use in—						
Building and construction . . . .	131,369	132,651	146,947	3.9	3.5	3.6
Rural industries . . . . .	55,631	51,124	45,383	1.6	1.3	1.1
Manufacturing—						
Motor vehicle assembly(a) . . . .	235,990	288,070	288,100	6.9	7.5	7.0
Other(b) . . . . .	1,175,519	1,257,031	1,297,891	34.4	32.9	31.7
Total producers' materials(b) . .	1,598,509	1,728,876	1,778,321	46.8	45.2	43.4
Capital equipment(c)—						
Producers' equipment . . . . .	723,851	858,196	981,930	21.1	22.4	23.9
Transport equipment—						
Complete road vehicles and assembled chassis . . . . .	108,779	121,324	155,285	3.2	3.2	3.8
Railway equipment, vessels and civil aircraft . . . . .	73,262	108,499	137,780	2.0	2.8	3.4
Total capital equipment . . . . .	905,892	1,088,019	1,274,995	26.3	28.4	31.1
Finished consumer goods—						
Food, beverages and tobacco . . . .	126,777	142,879	157,234	3.7	3.8	3.8
Clothing and accessories . . . . .	35,468	45,382	57,108	1.1	1.2	1.4
All other(d) . . . . .	463,303	578,359	580,210	13.5	15.1	14.2
Total, finished consumer goods(d) .	625,548	766,620	794,552	18.3	20.1	19.4
Fuels and lubricants(e) . . . . .	33,388	47,905	61,495	1.0	1.3	1.5
Auxiliary aids to production(f) . . . .	85,800	95,875	99,823	2.5	2.5	2.4
Munitions and war stores . . . . .	174,139	95,328	89,419	5.1	2.5	2.2
Grand total . . . . .	3,423,276	3,822,623	4,098,605	100.0	100.0	100.0
DEGREE OF MANUFACTURE(g)						
Producers' materials—						
Crude . . . . .	423,590	415,145	318,073	12.4	10.9	7.8
Simply transformed . . . . .	231,376	272,213	291,021	6.8	7.2	7.1
Elaborately transformed . . . . .	943,543	1,041,518	1,169,227	27.6	27.2	28.5
Finished consumer goods—						
Crude . . . . .	32,912	34,106	44,853	1.0	0.9	1.1
Simply transformed . . . . .	48,046	47,784	56,543	1.4	1.2	1.4
Elaborately transformed . . . . .	544,590	684,730	693,156	15.9	17.9	16.9
Total imports—						
Crude . . . . .	456,502	449,251	362,926	13.4	11.8	8.9
Simply transformed . . . . .	368,043	429,473	474,678	10.8	11.2	11.6
Elaborately transformed . . . . .	2,598,731	2,943,899	3,261,001	75.8	77.0	79.5
Grand total . . . . .	3,423,276	3,822,623	4,098,605	100.0	100.0	100.0

(a) Owing to insufficient information, it is not possible to treat unassembled tractors and other machinery in a similar manner to motor vehicles, and all such machinery and replacement parts therefor are treated as capital equipment whether imported in an assembled or unassembled condition. (b) Excludes a percentage for piece-goods to be sold at retail, and paper to be used solely for wrapping, which are recorded in Finished consumer goods. All other; and Auxiliary aids to production, respectively. (c) See footnote (a). (d) Includes a percentage for piece-goods to be sold at retail; see footnote (b). (e) Excludes crude petroleum, which is included in Producers' materials, Manufacturing—Other. (f) Includes a percentage for paper to be used solely for wrapping; see footnote (b). (g) The class Fuels and lubricants consists of goods 'simply transformed', and the classes Capital equipment and Munitions and war stores entirely of goods 'more elaborately transformed'. The class Auxiliary aids to production is about equally divided between goods 'simply transformed' and 'elaborately transformed'.

## Direction of Overseas Trade

## Exports and imports, by country of consignment or of origin

The following two tables show the value and percentage of Australian exports and imports during each of the years 1950-51, 1960-61 and 1970-71 according to principal country of consignment or origin. The proportions of Australian exports and imports by country of origin or consignment are shown graphically on plate 27 on page 296.

AUSTRALIAN EXPORTS AND IMPORTS, VALUE BY COUNTRY OF CONSIGNMENT  
OR ORIGIN, 1950-51, 1960-61, 1970-71  
(\$'000 f.o.b.)

Country	Exports			Imports		
	1950-51	1960-61	1970-71	1950-51	1960-61	1970-71
Austria . . . . .	1,248	3,200	1,066	4,528	7,866	12,350
Belgium-Luxembourg . . . . .	96,490	45,522	42,978	22,700	22,352	27,726
Brunei . . . . .	(a)	(a)	1,121	(a)	(a)	7,061
Canada . . . . .	34,424	34,054	106,077	33,914	91,328	166,534
Ceylon . . . . .	17,900	14,360	14,199	22,632	20,332	12,073
China, Republic of (mainland) . . . . .	1,700	79,714	63,277	5,314	7,948	31,584
China, Republic of (Taiwan) . . . . .	..	4,016	40,009	..	448	22,854
Czechoslovakia . . . . .	7,432	12,504	5,422	11,968	6,156	8,285
Denmark . . . . .	5,566	1,060	3,627	1,088	5,196	12,306
Fiji . . . . .	5,256	10,442	24,659	144	2,710	4,064
Finland . . . . .	920	528	1,599	5,418	10,486	20,158
France . . . . .	179,640	102,144	103,043	32,828	33,444	74,213
Germany, Federal Republic of . . . . .	55,474	53,510	131,284	29,330	132,352	295,661
Hong Kong . . . . .	11,936	37,578	90,403	3,830	12,486	61,116
India . . . . .	43,962	28,084	38,031	70,848	45,414	32,230
Indonesia . . . . .	6,486	11,814	39,076	43,576	57,252	22,523
Iran . . . . .	2,560	4,382	25,049	31,924	36,426	13,319
Iraq . . . . .	266	15,948	25,075	674	9,110	13,445
Italy . . . . .	98,020	95,450	70,897	33,310	31,558	86,089
Japan . . . . .	123,100	322,976	1,190,682	31,190	130,890	573,628
Korea, Republic of . . . . .	(a)	3,442	9,685	(a)	150	5,762
Kuwait . . . . .	(a)	2,708	12,567	(a)	14,438	35,226
Malaysia . . . . .	(a)	51,074	66,494	(a)	58,760	32,740
Mexico . . . . .	6,914	8,756	9,417	16	3,884	1,598
Nauru . . . . .	888	2,194	4,141	2,350	4,746	12,102
Netherlands . . . . .	22,480	12,516	47,567	16,462	34,020	69,354
New Zealand . . . . .	40,530	123,968	232,231	6,550	34,774	95,240
Norway . . . . .	3,014	2,932	11,194	9,924	9,408	11,318
Pakistan . . . . .	1,900	9,842	16,112	14,580	11,002	14,552
Papua New Guinea . . . . .	13,292	35,656	163,369	10,062	15,054	22,630
Philippines . . . . .	956	7,392	40,935	104	812	4,962
Poland . . . . .	29,570	15,862	12,792	818	786	3,511
Saudi Arabia . . . . .	(a)	1,746	14,466	(a)	21,758	23,575
Singapore . . . . .	21,750	(b)	118,397	21,004	(b)	23,303
South Africa, Republic of . . . . .	8,356	14,658	85,947	10,640	18,458	20,348
Spain . . . . .	312	3,112	9,832	2,706	4,950	17,759
Sweden . . . . .	24,852	4,510	12,497	32,596	35,860	76,067
Switzerland . . . . .	4,616	4,212	6,439	10,154	27,532	62,970
Thailand . . . . .	1,754	3,774	32,290	206	886	3,918
United Arab Republic . . . . .	44,611	11,636	60,471	3,057	228	2,735
United Kingdom . . . . .	641,210	463,182	492,775	713,762	681,062	887,168
United States of America . . . . .	297,660	144,948	521,319	121,756	434,084	1,041,687
U.S.S.R. . . . .	16,792	16,396	62,376	1,430	1,700	2,204
Yugoslavia . . . . .	4,628	8,454	22,113	476	136	940
Other countries . . . . .	85,127	90,268	276,086	123,197	95,164	164,842
'For Orders' and Country of origin or destination unknown . . . . .	..	17,162	15,595	676	1,748	16,343
<b>Total . . . . .</b>	<b>1,963,592</b>	<b>1,937,686</b>	<b>4,374,682</b>	<b>1,487,742</b>	<b>2,175,154</b>	<b>4,150,073</b>

(a) Comparable figures not available.

(b) Included with Malaysia.



**AUSTRALIAN EXPORTS AND IMPORTS, PROPORTIONS, BY COUNTRY OF CONSIGNMENT  
OR ORIGIN, 1950-51, 1960-61, 1970-71**

(Per cent)

Country	Exports			Imports		
	1950-51	1960-61	1970-71	1950-51	1960-61	1970-71
Austria . . . . .	0.06	0.16	0.02	0.30	0.36	0.30
Belgium-Luxembourg . . . . .	4.91	2.35	0.98	1.52	1.03	0.69
Brunei . . . . .	(a)	(a)	0.03	(a)	(a)	0.17
Canada . . . . .	1.75	1.76	2.42	2.28	4.20	4.01
Ceylon . . . . .	0.91	0.74	0.33	1.52	0.93	0.29
China, Republic of (mainland) . . . . .	0.09	4.11	1.45	0.36	0.36	0.76
China, Republic of (Taiwan) . . . . .	..	0.21	0.91	..	0.02	0.55
Czechoslovakia . . . . .	0.38	0.64	0.12	0.80	0.28	0.20
Denmark . . . . .	0.28	0.05	0.08	0.07	0.24	0.30
Fiji . . . . .	0.27	0.54	0.56	0.01	0.12	0.10
Finland . . . . .	0.05	0.03	0.04	0.36	0.48	0.49
France . . . . .	9.15	5.27	2.35	2.20	1.54	1.79
Germany, Federal Republic of . . . . .	2.82	2.76	3.00	1.97	6.08	7.13
Hong Kong . . . . .	0.61	1.94	2.07	0.26	0.57	1.47
India . . . . .	2.24	1.45	0.87	4.76	2.09	0.78
Indonesia . . . . .	0.33	0.61	0.89	2.93	2.63	0.54
Iran . . . . .	0.13	0.23	0.57	2.14	1.67	0.32
Iraq . . . . .	0.01	0.82	0.57	0.04	0.42	0.32
Italy . . . . .	4.99	4.92	1.62	2.24	1.45	2.08
Japan . . . . .	6.27	16.67	27.22	2.09	6.02	13.82
Korea, Republic of . . . . .	(a)	0.18	0.22	(a)	0.01	0.14
Kuwait . . . . .	(a)	0.14	0.29	(a)	0.66	0.85
Malaysia . . . . .	(a)	2.64	1.52	(a)	2.70	0.79
Mexico . . . . .	0.35	0.45	0.22	..	0.18	0.04
Nauru . . . . .	0.04	0.11	0.09	0.16	0.22	0.29
Netherlands . . . . .	1.14	0.65	1.09	1.10	1.56	1.67
New Zealand . . . . .	2.06	6.40	5.31	0.44	1.60	2.29
Norway . . . . .	0.15	0.15	0.26	0.67	0.43	0.27
Pakistan . . . . .	0.10	0.51	0.37	0.98	0.51	0.35
Papua New Guinea . . . . .	0.68	1.84	3.73	0.68	0.69	0.55
Philippines . . . . .	0.05	0.38	0.94	0.01	0.04	0.12
Poland . . . . .	1.50	0.82	0.29	0.05	0.04	0.08
Saudi Arabia . . . . .	(a)	0.09	0.33	(a)	1.00	0.57
Singapore . . . . .	1.11	(b)	2.71	1.41	(b)	0.56
South Africa, Republic of . . . . .	0.42	0.76	1.96	0.71	0.85	0.49
Spain . . . . .	0.02	0.16	0.22	0.18	0.23	0.43
Sweden . . . . .	1.27	0.23	0.29	2.19	1.65	1.83
Switzerland . . . . .	0.24	0.22	0.15	0.68	1.27	1.52
Thailand . . . . .	0.09	0.19	0.74	0.01	0.04	0.09
United Arab Republic . . . . .	2.27	0.60	1.38	0.21	0.01	0.07
United Kingdom . . . . .	32.66	23.90	11.26	47.98	31.31	21.36
United States of America . . . . .	15.16	7.48	11.92	8.18	19.96	25.10
U.S.S.R. . . . .	0.86	0.85	1.43	0.10	0.08	0.05
Yugoslavia . . . . .	0.24	0.44	0.51	0.03	0.01	0.02
Other countries . . . . .	4.34	4.66	6.31	8.34	4.38	3.97
'For Orders' and Country of origin or destination unknown . . . . .	..	0.89	0.36	0.04	0.08	0.39
<b>Total . . . . .</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

(a) Comparable figures not available. (b) Included with Malaysia.

## Exports and Imports, by country of consignment and origin, and by description

The following table shows details of exports to and imports from principal countries, classified according to divisions of the Australian Export and Import Commodity Classifications, for the year 1970-71.

## EXPORTS AND IMPORTS BY COUNTRY OF CONSIGNMENT AND ORIGIN: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1970-71

(\$'000 f.o.b.)

Division No.	Description	Belgium-Luxembourg		Canada		China, Republic of (mainland)	
		Exports	Imports	Exports	Imports	Exports	Imports
00	Live animals . . . . .	..	..	55	..	..	..
01	Meat and meat preparations . . . . .	340	..	24,300	81	..	34
02	Dairy products and eggs . . . . .	4	2	379	..	..	..
03	Fish and fish preparations . . . . .	61	16	275	1,506	..	584
04	Cereal grains and cereal preparations . . . . .	63	16	58	434	57,472	36
05	Fruit and vegetables . . . . .	722	261	9,069	533	..	898
06	Sugar and sugar preparations and honey . . . . .	1	5	29,554	15	..	2
07	Coffee, tea, cocoa, spices and manufactures thereof . . . . .	..	9	60	..	..	286
08	Feeding-stuff for animals (except unmilled cereals) . . . . .	5	..	17	..	..	..
09	Miscellaneous preparations chiefly for food . . . . .	3	8	5	133	..	67
11	Beverages . . . . .	..	..	1,644	121	..	..
12	Tobacco and tobacco manufactures . . . . .	..	9	..	114	..	96
21	Hides, skins and fur skins, undressed . . . . .	193	..	23	10	403	109
22	Oil-seeds, oil nuts and oil kernels . . . . .	12	..	..	21	..	140
23	Crude rubber (including synthetic and reclaimed) . . . . .	14	474	2	642	..	..
24	Wood, timber and cork . . . . .	168	15	2	13,812	..	2
25	Pulp and waste paper . . . . .	..	..	..	9,434	..	..
26	Textile fibres and their waste . . . . .	24,486	839	3,786	1,828	2,951	405
27	Crude fertilisers and crude minerals (except coal, petroleum and precious stones) . . . . .	2	28	4	13,215	..	422
28	Metalliferous ores and metal scrap . . . . .	13,598	..	15,534	2,927	378	106
29	Crude animal and vegetable materials, n.e.s. . . . .	97	57	551	203	..	1,519
32	Coal, coke and briquettes . . . . .	..	..	..	89	..	..
33	Petroleum and petroleum products . . . . .	..	59	12	146	..	444
34	Petroleum gases and other gaseous hydrocarbons . . . . .	(a)	..	(a)	..	(a)	..
41	Animal oils and fats . . . . .	79	..	19	..	374	..
42	Fixed vegetable oils and fats . . . . .	..	1	..	348	..	341
43	Animal and vegetable oils and fats, processed and waxes of animal or vegetable origin . . . . .	..	2	12	106	..	..
51	Chemical elements and compounds . . . . .	72	888	11,798	3,648	527	521
52	Mineral tar and crude chemicals from coal, petroleum and natural gas . . . . .	..	..	..	10	..	..
53	Dyeing, tanning and colouring materials . . . . .	1	62	5	387	..	30
54	Medicinal and pharmaceutical products . . . . .	1	328	9	298	..	51
55	Essential oils and perfume materials; toilet, polishing and cleansing preparations . . . . .	25	82	8	149	..	217
56	Fertilisers, manufactured . . . . .	..	20	11	1,900	..	..
57	Explosives and pyrotechnic products . . . . .	15	21	17	587	..	337
58	Plastic materials, regenerated cellulose and artificial resins . . . . .	19	356	21	4,105	..	1
59	Chemical materials and products, n.e.s. . . . .	129	220	704	694	..	981
61	Leather, leather manufactures, n.e.s., and dressed fur skins . . . . .	6	38	148	20	..	18
62	Rubber manufactures, n.e.s. . . . .	3	240	23	880	..	3
63	Wood and cork manufactures (except furniture) . . . . .	3	66	11	180	..	75
64	Paper, paperboard and manufactures thereof . . . . .	2	1,021	47	29,591	..	182
65	Textile yarn, fabrics, made-up articles and related products . . . . .	21	3,256	957	4,703	30	14,935
66	Non-metallic mineral manufactures, n.e.s. . . . .	289	6,104	122	1,003	4	1,236
67	Iron and steel . . . . .	873	723	443	7,409	187	60
68	Non-ferrous metals . . . . .	831	224	70	5,301	928	20
69	Manufactures of metal, n.e.s. . . . .	163	951	1,389	5,393	14	393
71	Machinery (except electric) . . . . .	115	6,708	1,166	22,103	..	97
72	Electric machinery, apparatus and appliances . . . . .	174	1,997	450	7,589	1	138
73	Transport equipment . . . . .	11	61	177	13,599	..	28
81	Sanitary, plumbing, heating and lighting fixtures and fittings . . . . .	..	7	1	138	..	43
82	Furniture . . . . .	..	1	2	121	..	47
83	Travel goods, handbags and similar articles . . . . .	..	1	1	61	..	111
84	Clothing and clothing accessories; articles of knitted or crocheted fabric . . . . .	14	32	572	495	..	3,146
85	Footwear, gaiters, and similar articles and parts therefor . . . . .	1	..	..	87	..	845
86	Professional, scientific and controlling instruments; photographic and optical goods, watches and clocks . . . . .	63	1,396	889	2,552	..	508
89	Miscellaneous manufactured articles, n.e.s. . . . .	88	465	516	2,953	..	1,344
9A	Commodities and transactions of merchandise trade, not elsewhere classified(b) . . . . .	125	584	159	4,466	8	721
	Total merchandise . . . . .	42,895	27,649	105,078	166,136	63,277	31,577
9B	Commodities and transactions not included in merchandise trade . . . . .	83	77	999	398	..	7
	Grand total . . . . .	42,978	27,726	106,077	166,534	63,277	31,584

(a) Included in Division 9A.

(b) Includes Division 34 (Exports only).

EXPORTS AND IMPORTS BY COUNTRY OF CONSIGNMENT AND ORIGIN: DIVISIONS OF THE  
 AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1970-71—continued  
 (\$'000 f.o.b.)

Div. No.	China, Republic of (Taiwan)		France		Germany, Federal Republic of		Hong Kong		India	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
00	..	..	..	..	..	..	129	..	78	..
01	44	2	1,845	22	348	9	916	..	34	..
02	2,537	1	..	156	..	181	3,986	..	271	..
03	..	142	1,963	43	104	672	2,812	210	..	1,241
04	15,485	..	60	10	15,533	132	6,602	66	6,117	14
05	38	855	1,017	224	7,425	211	1,715	183	35	2,024
06	..	..	..	50	155	9	51	40	5	..
07	60	48	..	15	..	200	293	43	3	3,386
08	82	1	..	6	34	139	164	..	1	..
09	2	173	6	33	..	149	328	158	2	3
11	3	..	..	2,793	2	451	202	8	27	..
12	..	38	..	148	..	27	415	1	2	137
21	633	..	30,093	33	5,086	2	1,850	..	44	4
22	..	..	2	1	47	..	1	84	..	23
23	6	..	..	419	..	445	28	..	..	..
24	..	119	10	24	58	19	39	126	..	9
25	26	..	..	5	..	..	..	..	..	..
26	12,183	2	42,188	96	39,310	1,677	6,453	173	15,130	835
27	139	..	62	209	..	110	151	4	..	280
28	359	..	12,148	..	25,549	43	186	15	701	..
29	64	40	241	180	2,790	175	177	258	17	517
32	351	..	473	..	4,630	147	7	..	..	..
33	11	..	4	259	3	237	..	..	..	201
34	(a)	..	(a)	10	(a)	..	(a)	..	(a)	..
41	378	..	1,173	1	710	..	87	..	2	..
42	..	..	..	3	..	182	..	26	..	..
43	76	..	..	38	15	87	234	..	..	4
51	607	151	49	5,212	58	15,469	180	32	34	453
52	..	..	..	..	..	4	..	..	..	..
53	527	..	6	452	222	5,362	392	6	90	49
54	17	1	419	454	124	8,126	837	39	27	135
55	13	15	37	1,405	23	1,453	553	515	56	83
56	..	..	..	384	..	904	..	..	..	..
57	..	77	49	13	140	90	149	14	..	..
58	8	151	3	2,027	17	8,762	597	57	11	1
59	120	..	63	881	567	4,348	115	102	93	8
61	6	13	70	709	458	490	732	70	5	245
62	3	628	1	2,024	30	2,192	41	4	2	24
63	..	3,335	2	129	74	854	8	217	..	61
64	3	24	3	526	16	3,380	859	253	53	25
65	63	8,743	33	4,073	94	12,752	2,056	19,410	6	17,340
66	136	861	145	2,932	1,404	6,112	5,279	514	60	848
67	1,294	435	21	2,175	121	4,018	4,008	5	529	497
68	2,313	14	7,869	249	22,140	1,692	6,135	7	11,857	1
69	105	299	255	990	308	9,320	1,289	1,096	10	236
71	1,120	230	287	13,014	1,031	81,836	1,806	340	340	1,515
72	451	345	248	5,421	427	32,574	2,308	948	52	280
73	439	112	343	10,139	132	52,842	2,985	602	429	49
81	9	51	4	26	6	619	217	427	1	23
82	..	183	3	50	29	168	82	509	3	46
83	..	253	..	50	..	168	10	2,606	..	31
84	9	2,675	69	942	160	865	1,476	12,677	..	445
85	..	1,016	1	435	17	359	23	1,598	10	374
86	48	162	736	2,498	423	15,948	1,989	1,615	12	27
89	34	1,218	389	5,527	373	10,816	6,137	15,081	21	365
9A	28	433	145	5,780	523	7,023	471	895	179	334
	39,836	22,847	102,536	73,294	130,718	293,850	67,560	61,033	36,349	32,171
9B	173	7	507	919	566	1,811	22,843	83	1,682	59
	40,009	22,854	103,043	74,213	131,284	295,661	90,403	61,116	38,031	32,230

(a) Included in Division 9A.



EXPORTS AND IMPORTS BY COUNTRY OF CONSIGNMENT AND ORIGIN: DIVISIONS OF THE  
AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1970-71—continued  
(\$'000 f.o.b.)

Division No.	Description	Indonesia		Italy		Japan	
		Exports	Imports	Exports	Imports	Exports	Imports
00	Live animals . . . . .	149	..	2	..	44	..
01	Meat and meat preparations . . . . .	61	..	1,009	94	41,428	17
02	Dairy products and eggs . . . . .	2,310	..	6	640	12,512	..
03	Fish and fish preparations . . . . .	16	5	290	31	15,761	11,578
04	Cereal grains and cereal preparations . . . . .	4,250	..	5,992	124	92,020	150
05	Fruit and vegetables . . . . .	186	..	546	1,313	1,896	358
06	Sugar and sugar preparations and honey . . . . .	31	..	8	37	46,952	148
07	Coffee, tea, cocoa, spices and manufactures thereof . . . . .	38	5,859	..	63	1,758	1,371
08	Feeding-stuff for animals (except unmilled cereals) . . . . .	16	..	..	12	4,059	289
09	Miscellaneous preparations chiefly for food . . . . .	361	1	2	102	45	167
11	Beverages . . . . .	173	..	1	935	22	25
12	Tobacco and tobacco manufactures . . . . .	68	54	..	7	2	6
21	Hides, skins and fur skins, undressed . . . . .	..	..	11,323	..	7,810	1
22	Oil-seeds, oil nuts and oil kernels . . . . .	2	..	..	..	961	2
23	Crude rubber (including synthetic and reclaimed) . . . . .	2	57	..	..	20	968
24	Wood, timber and cork . . . . .	63	434	..	..	205	41
25	Pulp and waste paper . . . . .	62	..	..	..	17	9
26	Textile fibres and their waste . . . . .	325	40	34,027	79	199,902	4,379
27	Crude fertilisers and crude minerals (except coal, petroleum and precious stones) . . . . .	327	..	2	431	11,832	941
28	Metalliferous ores and metal scrap . . . . .	59	4	9,909	..	446,527	4
29	Crude animal and vegetable materials, n.e.s. . . . .	15	21	466	64	3,794	318
32	Coal, coke and briquettes . . . . .	168	..	1,672	..	173,044	..
33	Petroleum and petroleum products . . . . .	625	15,649	4	3	1,166	1,252
34	Petroleum gases and other gaseous hydrocarbons . . . . .	(a)	..	(a)	..	(a)	..
41	Animal oils and fats . . . . .	2	..	401	..	6,847	754
42	Fixed vegetable oils and fats . . . . .	10	..	..	301	..	1,641
43	Animal and vegetable oils and fats, processed and waxes of animal or vegetable origin . . . . .	40	..	..	..	86	17
51	Chemical elements and compounds . . . . .	1,739	..	3	651	24,130	23,429
52	Mineral tar and crude chemicals from coal, petroleum and natural gas . . . . .	32	..	..	..	..	158
53	Dyeing, tanning and colouring materials . . . . .	220	..	39	238	31	897
54	Medicinal and pharmaceutical products . . . . .	607	6	110	439	650	954
55	Essential oils and perfume materials; toilet, polishing and cleansing preparations . . . . .	117	54	61	292	1,062	454
56	Fertilisers, manufactured . . . . .	..	..	..	173	1	911
57	Explosives and pyrotechnic products . . . . .	98	..	72	31	86	180
58	Plastic materials, regenerated cellulose and artificial resins . . . . .	61	1	1	1,275	127	16,303
59	Chemical materials and products, n.e.s. . . . .	109	..	182	37	5,024	1,628
61	Leather, leather manufactures, n.e.s., and dressed fur skins . . . . .	30	..	35	283	314	423
62	Rubber manufactures, n.e.s. . . . .	81	..	4	1,125	6	13,744
63	Wood and cork manufactures (except furniture) . . . . .	110	15	7	492	1,902	1,888
64	Paper, paperboard and manufactures thereof . . . . .	626	..	2	1,731	160	9,460
65	Textile yarn, fabrics, made-up articles and related products . . . . .	189	20	5	7,756	1,109	93,127
66	Non-metallic mineral manufactures, n.e.s. . . . .	298	6	26	2,535	5,106	15,890
67	Iron and steel . . . . .	2,376	..	39	965	19,245	75,863
68	Non-ferrous metals . . . . .	2,996	..	2,211	80	41,653	1,965
69	Manufactures of metal, n.e.s. . . . .	1,506	2	331	1,864	2,569	21,003
71	Machinery (except electric) . . . . .	4,139	..	624	24,466	1,452	64,101
72	Electric machinery, apparatus and appliances . . . . .	1,200	..	365	7,314	685	43,503
73	Transport equipment . . . . .	7,378	..	53	11,428	3,689	99,258
81	Sanitary, plumbing, heating and lighting fixtures and fittings . . . . .	53	..	..	588	27	367
82	Furniture . . . . .	65	1	1	702	5	905
83	Travel goods, handbags and similar articles . . . . .	2	..	1	395	34	1,424
84	Clothing and clothing accessories; articles of knitted or crocheted fabric . . . . .	24	4	131	1,943	373	2,694
85	Footwear, gaiters, and similar articles and parts thereof . . . . .	6	3	2	4,362	6	2,449
86	Professional, scientific and controlling instruments; photo- graphic and optical goods, watches and clocks . . . . .	396	2	139	2,966	649	18,191
89	Miscellaneous manufactured articles, n.e.s. . . . .	256	45	94	4,460	1,633	25,817
9A	Commodities and transactions of merchandise trade, not elsewhere classified(b) . . . . .	2,260	220	139	1,586	4,516	11,152
	Total merchandise . . . . .	36,329	22,505	70,336	84,413	1,184,954	572,574
9B	Commodities and transactions not included in merchandise trade . . . . .	2,747	18	561	1,676	5,728	1,054
	Grand total . . . . .	39,076	22,523	70,897	86,089	1,190,682	573,628

(a) Included in Division 9A.

(b) Includes Division 34 (Exports only).

EXPORTS AND IMPORTS BY COUNTRY OF CONSIGNMENT AND ORIGIN: DIVISIONS OF THE  
 AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1970-71—continued  
 (\$'000 f.o.b.)

Div. No.	Malaysia		Netherlands		New Zealand		Pakistan		Papua New Guinea	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
00	214	..	..	..	1,233	4,226	39	..	65	..
01	880	..	394	10	36	458	2	..	8,784	..
02	4,225	..	..	651	60	952	386	..	1,961	..
03	308	1,286	45	660	213	3,604	..	165	286	180
04	18,706	..	5,682	316	5,544	2,241	8,366	30	9,606	..
05	1,306	104	2,145	584	4,389	3,334	6	38	1,420	1,347
06	2,102	..	31	259	3,351	956	4	..	2,239	..
07	657	915	..	885	91	187	..	2	738	7,708
08	843	..	22	35	101	58	2	9	750	..
09	194	4	..	303	126	304	18	3	810	..
11	75	..	2	82	321	93	10	..	2,940	1
12	146	..	2	4,668	39	54	1	..	2,580	36
21	253	7	984	5	297	204	..	..	..	73
22	..	..	46	20	407	18	..	4	3	4,560
23	1	10,437	..	33	658	..	2	..	10	2,198
24	..	13,586	15	..	1,094	4,997	94	..	85	1,269
25	219	18	..	..	8	7,969	..	..	8	..
26	..	41	5,303	1,405	1,604	5,276	2,926	2,756	107	..
27	..	..	..	..	..	..	..	..	..	..
28	81	..	343	389	850	88	..	3	264	1
29	230	14	7,149	..	1,169	1,679	23	..	21	407
32	217	147	489	225	770	1,550	..	153	158	18
33	7	..	1,699	..	2	..	804	..	1	..
34	755	1,280	..	123	13,155	27	..	962	1,816	2
41	(a)	..	(a)	..	(a)	..	(a)	..	(a)	..
42	935	..	2,017	..	24	100	621	..	399	..
43	1	1,766	..	102	23	..	..	..	52	..
51	98	..	1	773	29	15	29	..	21	..
52	966	67	62	2,920	5,991	1,150	35	..	541	3
53	14	..	..	9	13	..	..	..	13	..
54	305	..	61	574	2,984	93	45	..	511	..
55	976	1	616	872	12,388	951	29	..	660	..
56	531	17	5	243	1,006	834	2	..	1,315	..
57	2	..	14	41	95	..	..	..	42	..
58	..	..	..	..	1,247	1	21	..	543	..
59	348	..	6	2,136	3,813	204	7	..	1,022	..
61	217	7	112	1,607	2,703	391	1	..	581	317
62	109	..	101	4	239	193	..	61	13	..
63	70	508	25	873	733	485	7	..	1,764	..
64	23	588	3	103	706	413	1	3	612	2,591
65	2,127	2	2	1,425	1,755	17,556	23	16	2,707	..
66	443	299	29	4,746	11,878	12,769	16	9,589	760	1
67	387	2	80	1,175	1,682	1,397	36	2	2,465	668
68	1,451	7	44	218	28,000	125	251	..	5,411	..
69	3,975	376	7,799	235	23,465	331	36	..	731	15
71	1,547	16	235	697	9,053	2,112	191	56	11,180	4
72	5,650	17	513	7,619	17,555	3,647	691	25	20,178	55
73	2,376	41	2,522	9,949	11,078	4,762	90	..	8,100	17
81	3,340	1	7,909	14,299	34,576	998	407	..	16,048	10
82	142	1	..	239	288	263	..	4	610	..
83	81	2	4	70	46	405	4	6	856	1
84	4	..	..	12	17	429	..	4	38	..
85	310	2	144	14	379	1,471	16	153	1,044	1
86	1	11	..	57	79	211	..	12	506	..
89	229	11	198	1,808	5,529	390	18	105	2,198	52
9A	275	42	58	2,881	6,844	2,904	8	240	2,638	57
	1,069	1,076	117	2,352	2,446	1,876	20	149	29,479	345
	59,422	32,700	47,024	68,707	222,183	94,754	15,289	14,552	147,689	21,937
9B	7,072	40	543	647	10,048	486	823	..	15,680	693
	66,494	32,740	47,567	69,354	232,231	95,240	16,112	14,552	163,369	22,630

(a) Included in Division 9A.

EXPORTS AND IMPORTS BY COUNTRY OF CONSIGNMENT AND ORIGIN: DIVISIONS OF THE  
AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1970-71—continued  
(\$'000 f.o.b.)

Division No.	Description	Philippines		Singapore		South Africa, Republic of	
		Exports	Imports	Exports	Imports	Exports	Imports
00	Live animals . . . . .	60	..	1,628	..	3	..
01	Meat and meat preparations . . . . .	531	..	4,500	3	202	..
02	Dairy products and eggs . . . . .	5,536	..	4,135	..	413	..
03	Fish and fish preparations . . . . .	..	6	494	393	891	1,318
04	Cereal grains and cereal preparations . . . . .	4,987	..	14,460	9	3,954	1
05	Fruit and vegetables . . . . .	15	344	6,164	22	515	346
06	Sugar and sugar preparations and honey . . . . .	1	..	3,454	..	5	5
07	Coffee, tea, cocoa, spices and manufactures thereof . . . . .	..	16	224	202	2	716
08	Feeding-stuff for animals (except unmilled cereals) . . . . .	1,077	..	1,459	..	71	..
09	Miscellaneous preparations chiefly for food . . . . .	34	..	376	45	71	10
11	Beverages . . . . .	5	4	382	..	10	..
12	Tobacco and tobacco manufactures . . . . .	..	456	417	..	..	2,085
21	Hides, skins and fur skins, undressed . . . . .	12	..	164	4	957	3
22	Oil-seeds, oil nuts and oil kernels . . . . .	1	..	1	..	29	1
23	Crude rubber (including synthetic and reclaimed) . . . . .	141	64	16	105	..	..
24	Wood, timber and cork . . . . .	..	1,765	..	52	136	..
25	Pulp and waste paper . . . . .	..	..	92	..	12	..
26	Textile fibres and their waste . . . . .	..	126	62	..	869	140
27	Crude fertilisers and crude minerals (except coal, petroleum and precious stones) . . . . .	70	2	156	..	192	4,552
28	Metalliferous ores and metal scrap . . . . .	260	571	68	6	513	21
29	Crude animal and vegetable materials, n.e.s. . . . .	..	55	241	116	401	127
32	Coal, coke and briquettes . . . . .	..	..	1	..	..	114
33	Petroleum and petroleum products . . . . .	85	..	10,984	18,388	3,378	46
34	Petroleum gases and other gaseous hydrocarbons . . . . .	(a)	..	(a)	..	(a)	..
41	Animal oils and fats . . . . .	999	..	603	..	5,031	126
42	Fixed vegetable oils and fats . . . . .	..	28	1	73	..	564
43	Animal and vegetable oils and fats, processed and waxes of animal or vegetable origin . . . . .	116	..	70	..	10	7
51	Chemical elements and compounds . . . . .	346	36	662	126	1,269	1,179
52	Mineral tar and crude chemicals from coal, petroleum and natural gas . . . . .	..	..	2	545	..	..
53	Dyeing, tanning and colouring materials . . . . .	406	..	897	..	71	635
54	Medicinal and pharmaceutical products . . . . .	528	..	559	..	585	23
55	Essential oils and perfume materials; toilet, polishing and cleansing preparations . . . . .	123	..	634	4	216	38
56	Fertilisers, manufactured . . . . .	2	..	4	..	..	..
57	Explosives and pyrotechnic products . . . . .	..	..	..	..	25	..
58	Plastic materials, regenerated cellulose and artificial resins . . . . .	341	..	420	1	601	4
59	Chemical materials and products, n.e.s. . . . .	136	1	287	2	164	110
61	Leather, leather manufactures, n.e.s., and dressed fur skins . . . . .	128	..	740	..	329	19
62	Rubber manufactures, n.e.s. . . . .	67	13	110	12	1,088	250
63	Wood and cork manufactures (except furniture) . . . . .	3	774	83	350	110	145
64	Paper, paperboard and manufactures thereof . . . . .	192	..	2,130	4	178	123
65	Textile yarn, fabrics, made-up articles and related products . . . . .	1,298	77	946	290	832	68
66	Non-metallic mineral manufactures, n.e.s. . . . .	312	20	1,093	55	223	1,317
67	Iron and steel . . . . .	7,933	..	2,239	44	1,886	2,802
68	Non-ferrous metals . . . . .	4,116	..	2,742	31	2,242	109
69	Manufactures of metal, n.e.s. . . . .	1,690	..	2,626	59	2,004	597
71	Machinery (except electric) . . . . .	6,008	2	8,684	29	7,713	1,145
72	Electric machinery, apparatus and appliances . . . . .	596	..	2,984	234	3,031	473
73	Transport equipment . . . . .	840	3	12,342	12	41,199	49
81	Sanitary, plumbing, heating and lighting fixtures and fittings . . . . .	5	2	250	1	35	2
82	Furniture . . . . .	..	86	59	41	24	2
83	Travel goods, handbags and similar articles . . . . .	..	23	20	13	8	5
84	Clothing and clothing accessories; articles of knitted or crocheted fabric . . . . .	83	66	485	105	352	3
85	Footwear, gaiters, and similar articles and parts thereof . . . . .	2	8	52	23	3	..
86	Professional, scientific and controlling instruments; photo- graphic and optical goods, watches and clocks . . . . .	943	3	1,707	168	914	343
89	Miscellaneous manufactured articles, n.e.s. . . . .	232	294	1,322	1,393	1,102	125
9A	Commodities and transactions of merchandise trade, not elsewhere classified(b) . . . . .	248	112	8,536	279	244	512
	Total merchandise . . . . .	40,505	4,957	102,767	23,243	84,044	20,270
9B	Commodities and transactions not included in merchandise trade . . . . .	430	5	15,630	60	1,903	78
	Grand total . . . . .	40,935	4,962	118,397	23,303	85,947	20,348

(a) Included in Division 9A.

(b) Includes Division 34 (Exports only).



EXPORTS AND IMPORTS BY COUNTRY OF CONSIGNMENT AND ORIGIN: DIVISIONS OF THE  
 AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1970-71—continued  
 (\$'000 f.o.b.)

Div. No.	Sweden		United Arab Republic		United Kingdom		United States of America		U.S.S.R.	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
00	..	..	..	..	51	856	1,868	548	91	..
01	2,817	..	..	..	55,490	136	232,595	30	26,897	..
02	..	141	..	..	35,622	70	918	162	..	..
03	18	23	..	..	501	9,273	30,976	1,239	..	178
04	9	178	56,478	..	95,439	1,310	1,687	145	..	..
05	2,729	13	34	27	48,314	950	6,345	4,607	..	3
06	40	1	..	..	42,695	800	27,069	67	..	..
07	..	2	..	..	235	994	53	601	..	..
08	..	..	..	..	12	14	89	3,576	..	..
09	35	23	..	1	342	2,594	326	838	..	..
11	5	5	..	..	812	11,398	102	484	..	7
12	..	..	..	..	3	1,548	24	15,855	..	..
21	535	80	18	..	2,326	39	1,574	286	..	53
22	..	..	..	..	175	126	..	1,134	..	..
23	..	..	..	..	19	1,147	381	6,144	..	..
24	7	36	..	..	1,621	74	169	13,267	..	..
25	..	4,563	..	..	..	2	..	11,410	..	..
26	572	1,058	3,870	..	30,466	4,281	12,890	6,465	35,349	..
27	..	60	..	..	204	1,973	512	5,950	..	2
28	380	..	18	..	35,009	30	39,529	692	..	..
29	37	..	..	..	1,775	1,932	2,408	3,892	..	598
32	..	..	..	..	9,546	37	1	336	..	..
33	9	5	..	2,592	1	1,873	1,455	9,077	..	..
34	(a)	..	(a)	..	(a)	17	(a)	21	(a)	..
41	6	..	..	..	1,550	95	535	9	..	..
42	..	104	..	..	..	146	..	4,427	..	..
43	..	..	..	..	..	..	..	..	..	..
51	..	12	..	..	334	341	20	466	..	..
52	..	374	..	..	173	27,637	57,744	47,677	..	329
53	9	11	..	..	..	141	236	2,335	..	..
54	..	495	..	..	114	8,419	918	3,799	..	..
55	..	..	..	..	1,515	17,803	912	11,508	..	17
56	..	12	..	..	117	4,876	114	5,878	..	9
57	61	17	..	..	..	51	3	2,389	..	..
58	1	190	..	..	281	3,470	49	1,563	..	3
59	2	282	..	..	243	29,917	365	22,751	..	..
61	44	57	..	..	3,418	18,486	9,976	26,638	..	..
62	1	608	..	..	1,412	2,641	218	591	..	4
63	4	576	..	..	62	16,251	4,404	16,703	..	..
64	10	7,285	..	..	461	1,280	300	462	..	2
65	16	817	..	105	80	13,099	335	18,838	..	..
66	2	710	..	..	306	44,769	1,324	21,125	..	86
67	112	7,193	..	..	1,021	21,792	3,675	11,414	2	23
68	2,847	194	..	..	304	18,281	7,736	10,856	..	12
69	229	5,228	1	..	88,734	11,103	25,214	4,917	..	60
71	509	22,944	13	..	3,537	32,454	3,837	23,006	..	..
72	393	10,888	1	..	4,672	213,465	8,909	303,359	12	287
73	216	8,977	15	..	4,868	82,874	2,988	62,157	..	17
81	..	168	..	..	2,485	139,141	6,745	214,181	..	40
82	7	76	..	1	109	1,880	21	695	..	..
83	..	37	..	..	17	1,807	19	484	..	..
84	..	..	..	..	15	527	27	184	..	..
85	122	48	..	..	1,079	7,592	1,593	2,333	..	1
86	..	105	..	..	15	3,136	173	89	..	..
89	176	820	..	3	3,098	36,887	2,758	40,131	1	334
9A	58	467	..	5	3,455	56,471	3,878	46,391	15	59
	139	946	1	1	1,245	24,247	3,293	36,436	..	54
	12,242	75,829	60,451	2,735	485,378	882,550	509,289	1,030,610	62,368	2,178
9B	340	238	20	..	7,396	4,618	12,029	11,077	8	26
	12,497	76,067	60,471	2,735	492,774	887,168	521,318	1,041,687	62,376	2,204

(a) Included in Division 9A.

### Trade with major groups of countries

Australia's trade with major groups of countries is shown in the following table. Particulars of Australia's balance of payments with countries in these groups are shown on pages 326-7.

#### TRADE OF AUSTRALIA, BY MAJOR GROUPS OF COUNTRIES 1968-69 TO 1970-71 (\$'000 f.o.b.)

	1968-69	1969-70	1970-71
STERLING AREA			
Exports to—			
United Kingdom . . . . .	424,836	488,230	492,775
Other countries . . . . .	659,536	851,348	943,220
Total . . . . .	1,084,372	1,339,578	1,435,995
Imports from—			
United Kingdom . . . . .	747,155	845,344	887,168
Other countries . . . . .	450,693	494,297	472,700
Total . . . . .	1,197,848	1,339,641	1,359,868
Excess of exports (+) or imports (—) . . . . .	—113,476	—63	+76,127
NON-STERLING COUNTRIES—NORTH AMERICA			
Exports to—			
Canada . . . . .	67,611	112,773	106,077
United States of America(a) . . . . .	493,238	570,364	532,753
Total . . . . .	560,849	683,137	638,830
Imports from—			
Canada . . . . .	153,084	151,031	166,534
United States of America(a) . . . . .	883,774	965,867	1,043,155
Total . . . . .	1,036,858	1,116,898	1,209,689
Excess of exports (+) or imports (—) . . . . .	—476,009	—433,761	—570,859
OTHER NON-STERLING COUNTRIES			
Exports to—			
European Economic Community . . . . .	454,908	497,589	464,914
European Free Trade Association(b) . . . . .	33,755	47,836	31,597
Other countries—			
Japan . . . . .	822,101	1,025,203	1,190,682
Eastern Europe, China (mainland), etc. . . . .	148,544	217,689	167,646
Other . . . . .	269,736	324,265	445,017
Total . . . . .	1,729,044	2,112,582	2,299,857
Imports from—			
European Economic Community . . . . .	419,249	521,028	573,939
European Free Trade Association(b) . . . . .	147,269	169,695	199,809
Other countries—			
Japan . . . . .	414,676	481,203	573,628
Eastern Europe, China (mainland), etc. . . . .	49,875	54,162	57,659
Other . . . . .	202,730	198,600	175,481
Total . . . . .	1,233,799	1,424,688	1,580,516
Excess of exports (+) or imports (—) . . . . .	+495,245	+687,894	+719,341
ALL GROUPS			
Total exports . . . . .	3,374,263	4,135,300	4,374,682
Total imports . . . . .	3,468,505	3,881,227	4,150,073
Excess of exports (+) or imports (—) . . . . .	—94,242	+254,073	+224,609

(a) Includes United States of America, Territories and Dependencies. (b) Other than United Kingdom.

Countries constituting the several groups are listed below.

<b>STERLING AREA—</b> Antarctica Bahama Is Bahrain Barbados Bermuda Botswana British Indian Ocean Territory Brunei Ceylon Christmas Is Cocos Is Cook Is Cyprus Falkland Is Fiji Gambia Ghana Gibraltar Gilbert and Ellice Is Guyana Honduras (British) Hong Kong India Ireland Jamaica Jordan Kuwait Leeward Is Lesotho Libya Malawi Malaysia Maldives Is Malta Mauritius Nauru, Republic of New Zealand Niue and Tokelau Is Norfolk Is Oman Pakistan Papua New Guinea Qatar Ross Dependency St Helena and Ascension Seychelles Sierra Leone Singapore Solomon Is South Africa, Republic of South West Africa South Yemen Swaziland Tonga	Trinidad and Tobago Trucial States United Kingdom Virgin Is (British) Western Samoa Windward Is Zambia	Polynesia (French) Reunion and Southern Is Rwanda St Pierre and Miquelon Senegal Somalia Surinam Tanzania Togo Tunisia Turkey Uganda Upper Volta Wallis and Futuna Is West Indies (French)	Argentina Bhutan Bolivia Brazil Burma Chile China, Republic of (Taiwan) Colombia Costa Rica Cuba Dominican Republic Ecuador El Salvador Equatorial Guinea, Republic of, previously included with Spanish Equatorial (West) Africa Ethiopia Guatemala Guinea Haiti Honduras (not British) Indonesia Iran Iraq Israel Japan Khmer, Republic of Korea, Republic of Laos Lebanon Liberia Mexico Nepal New Hebrides Nicaragua Panama Paraguay Peru Philippines Rhodesia Saudi Arabia Spain Spanish Sahara, previously included with Spanish Equatorial (West) Africa Sudan Syria Thailand United Arab Republic Uruguay Venezuela Vietnam, Republic of Yemen Yugoslavia
<b>NON-STERLING COUNTRIES—</b> <b>NORTH AMERICA—</b> Canada United States of America and Dependencies (Guam, Okinawa, Puerto Rico, Samoa, Virgin Is and other U.S. Pacific Is)	<b>EUROPEAN ECONOMIC COMMUNITY—</b> Antilles (Netherlands) Belgium-Luxembourg Burundi Cameroon Central African Republic Chad Congo (Brazzaville) Congo (Kinshasa) Dahomey France French Territory of the Afar and Issa Peoples formerly Somaliland (French) Gabon Germany, Federal Republic of Greece Guiana (French) Italy Ivory Coast Kenya Malagasy, Republic of Mali Mauritania Morocco Netherlands New Caledonia Niger Nigeria	<b>EUROPEAN FREE TRADE ASSOCIATION(a)—</b> Angola Austria Cape Verde Is Denmark Finland Guinea (Portuguese) Iceland Macao Mozambique Norway Portugal Sweden Switzerland Timor	
		<b>EASTERN EUROPE, CHINA, REPUBLIC OF]</b> <b>(MAINLAND), ETC.—</b> Albania Bulgaria China, Republic of (mainland) Czechoslovakia Germany (East) Hungary Korea (North) Mongolia Poland Romania U.S.S.R. Vietnam (North)	
		<b>OTHER—</b> Afghanistan Algeria	

(a) Other than United Kingdom.

## Trade with the United Kingdom

Since 1908, permanent resident Commissioners appointed by the British Board of Trade have been located in Australia for the purpose of advising manufacturers and merchants in Britain about Australian trade affairs. British Trade Commissioners are located in all Australian Capital Cities except Hobart. From 8 August 1907 the Commonwealth Customs Tariffs have provided preferential rates of customs duties on certain goods the produce or manufacture of the United Kingdom, with the object of assisting the British manufacturer to retain or improve his position in this market in relation to other countries. The main provisions in these Acts relating to preference are dealt with on pages 284-5 in this chapter. For details of exports to and imports from the United Kingdom, by divisions of the Australian Export and Import Commodity Classifications, see the table on page 309.

## Trade with eastern countries

Details of exports to and imports from eastern countries are shown in the following table. Further information for principal eastern countries, by divisions of the Australian Export and Import Commodity Classifications, is shown in the tables on pages 304-9.



TRADE OF AUSTRALIA WITH EASTERN COUNTRIES, BY COUNTRY OF CONSIGNMENT  
OR ORIGIN, 1968-69 TO 1970-71  
(\$'000 f.o.b.)

Country	Exports			Imports		
	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
Bhutan . . . . .	21	..	..	..	..	..
Brunei . . . . .	799	8,700	1,121	18,562	14,452	7,061
Burma . . . . .	2,928	3,802	2,771	125	295	231
Ceylon . . . . .	15,083	14,718	14,199	15,184	11,321	12,073
China, Republic of (mainland)	67,214	125,815	63,277	29,651	32,082	31,584
China, Republic of (Taiwan)	26,415	29,912	40,009	11,787	15,869	22,854
Hong Kong . . . . .	70,973	84,718	90,403	41,075	54,022	61,116
India . . . . .	32,017	40,237	38,031	32,196	31,839	32,230
Indonesia . . . . .	20,665	35,266	39,076	59,956	48,882	22,523
Japan . . . . .	822,101	1,025,203	1,190,682	414,676	481,203	573,628
Khmer, Republic of . . . . .	115	832	1,700	36	35	47
Korea (North) . . . . .	5,599	3,688	1,634	..	2	..
Korea, Republic of . . . . .	13,469	12,371	9,685	2,493	2,183	5,762
Laos . . . . .	114	126	274	1	..	..
Macao . . . . .	39	23	..	61	29	42
Malaysia . . . . .	63,670	68,525	66,494	30,022	34,922	32,740
Nepal . . . . .	26	44	802	21	23	10
Pakistan . . . . .	6,905	16,394	16,112	17,068	18,953	14,552
Philippines . . . . .	44,820	55,890	40,935	3,136	4,294	4,962
Singapore . . . . .	63,325	98,469	118,397	12,496	14,031	23,303
Thailand . . . . .	23,872	29,117	32,290	1,932	2,687	3,918
Timor . . . . .	1,001	554	539	..	4	..
Vietnam (North) . . . . .	..	..	..	..	..	..
Vietnam, Republic of . . . . .	31,063	23,193	15,117	81	30	98
<b>Total . . . . .</b>	<b>1,312,234</b>	<b>1,677,597</b>	<b>1,783,549</b>	<b>690,559</b>	<b>767,158</b>	<b>848,734</b>

### Ships' and aircraft stores

Ships' and aircraft stores loaded on overseas ships and aircraft are excluded from exports. The value of these stores is shown in the table below for each of the years 1968-69 to 1970-71.

STORES LOADED ON BOARD OVERSEAS VESSELS AND  
AIRCRAFT: AUSTRALIA, 1968-69 TO 1970-71  
(\$A'000 f.o.b.)

Stores	1968-69	1969-70	1970-71
Cigarettes, cigars and tobacco . . . . .	778	774	694
Fuel, lubricating oil and lubricants . . . . .	32,513	34,745	43,183
Foodstuffs for human consumption—			
Meats . . . . .	2,578	2,277	2,493
Sugar . . . . .	48	51	45
Milk and cream, preserved . . . . .	68	68	68
Butter . . . . .	163	169	165
Cheese . . . . .	79	68	84
Eggs in shell . . . . .	361	353	314
Seafoods . . . . .	710	623	693
Prepared grains . . . . .	211	158	167
Vegetables . . . . .	818	666	841
Fruit . . . . .	480	445	491
Tea . . . . .	12	11	11
Other . . . . .	678	711	689
Fodder . . . . .	71	45	47
Alcoholic beverages . . . . .	1,684	1,839	2,077
Coal . . . . .	9	33	7
Other ships' stores . . . . .	5,580	7,272	7,686
<b>Total . . . . .</b>	<b>46,841</b>	<b>50,308</b>	<b>59,755</b>

## Overseas trade at customs ports

The following table shows the value of exports and imports at customs ports of Australia during the year 1970-71, and the totals for each State and Territory.

OVERSEAS TRADE: CUSTOMS PORTS, AUSTRALIA, 1970-71  
(\$'000 f.o.b.)

Port or customs station	Exports	Imports	Port or customs station	Exports	Imports
<b>New South Wales—</b>			<b>South Australia—continued</b>		
Sydney . . . . .	732,972	1,517,556	Port Lincoln . . . . .	29,096	607
Kingsford-Smith Airport . . . . .	116,844	171,205	Port Pirie (including Port		
Coffs Harbour (including Ballina) . . . . .	480		Germein) . . . . .	76,471	991
Botany Bay (Kurnell) . . . . .	4,878	28,522	Port Wallaroo . . . . .	20,880	460
Newcastle (including Port			Whyalla . . . . .	24,390	5,995
Stephens) . . . . .	179,249	48,049	Parcels post, Adelaide . . . . .	(a)	2,591
Port Kembla . . . . .	73,742	35,263			
Richmond . . . . .	5,336	4,390	<i>Total South Australia</i> . . . . .	393,737	198,358
Parcels post, Sydney . . . . .	(a)	17,133			
<i>Total New South Wales</i> . . . . .	1,113,501	1,822,118	<b>Western Australia—</b>		
<b>Victoria—</b>			Fremantle . . . . .	356,949	172,872
Melbourne . . . . .	841,088	1,248,089	Perth . . . . .	680	210
Melbourne airport . . . . .	19,310	135,575	Perth Airport . . . . .	2,925	14,128
Geelong . . . . .	133,016	49,672	Kwinana . . . . .	6,643	34,632
Portland . . . . .	32,783	5,259	Albany . . . . .	36,263	1,925
Westernport . . . . .	8,711	6,732	Broome . . . . .	6,227	1,819
Parcels post, Melbourne . . . . .	(a)	13,256	Bunbury . . . . .	17,839	3,281
<i>Total Victoria</i> . . . . .	1,034,908	1,458,583	Busselton . . . . .	59	..
<b>Queensland—</b>			Carnarvon . . . . .	5,424	..
Brisbane . . . . .	315,541	224,715	Derby . . . . .	1,394	241
Brisbane airport . . . . .	10,406	71,654	Esperance . . . . .	53,321	1,702
Bowen . . . . .	6,009	1	Exmouth (North West Cape) . . . . .	231	612
Bundaberg . . . . .	17,691	10	Geraldton . . . . .	41,168	2,101
Cairns (including airport) . . . . .	34,268	2,333	King Bay (Dampier) . . . . .	152,134	29,394
Gladstone . . . . .	131,305	5,291	Port Hedland . . . . .	164,999	13,467
Innisfail . . . . .	29,795	2	Wyndham . . . . .	3,657	..
Mackay . . . . .	43,933	6,665	Yampi Sound (Cockatoo Island)	12,508	..
Maryborough (including Uran-			Parcels post, Perth . . . . .	(a)	1,960
gan) . . . . .	45	365	<i>Total Western Australia</i> . . . . .	862,421	278,344
Rockhampton (including airport			<b>Tasmania—</b>		
and Port Alma) . . . . .	37,951	1,040	Hobart (including airport) . . . . .	44,980	20,529
Thursday Island . . . . .	3,412	432	Burnie (including airport) . . . . .	39,658	10,839
Townsville (including airport) . . . . .	158,824	6,102	Devonport (including airport and		
Weipa . . . . .	(a)	1,126	Ulverstone) . . . . .	6,858	2,893
Parcels post, Brisbane . . . . .	(a)	1,902	Launceston (including airport and		
<i>Total Queensland</i> . . . . .	789,180	321,638	Beauty Point) . . . . .	28,855	11,458
<b>South Australia—</b>			Port Latta . . . . .	22,778	..
Port Adelaide (including Sten-			Port Stanley . . . . .	69	..
house Bay) . . . . .	205,244	161,238	Parcels post . . . . .	(b)	(b)
Adelaide city . . . . .			<i>Total Tasmania</i> . . . . .	143,198	45,719
Adelaide airport . . . . .	9,822	7,363	<b>Northern Territory—</b>		
Port Stanvac . . . . .	383	19,113	Darwin (including Darwin airport,		
Port Augusta . . . . .	8,377	..	Groote Eylandt and Gove) . . . . .	36,459	23,670
Cape Thevenard . . . . .	8,630	..	<b>Australian Capital Territory—</b>		
Edithburgh . . . . .	24	..	Canberra . . . . .	1,276	1,643
Ardrossan . . . . .	10,420	..	<i>Total</i> . . . . .	4,374,682	4,150,073

(a) Included with main port.

(b) Included with respective port.

### Movement of bullion and specie

The following table shows the values of gold and silver bullion and specie, and of bronze specie, exported from and imported into Australia during each of the years 1968-69 to 1970-71.

#### EXPORTS AND IMPORTS OF BULLION AND SPECIE: AUSTRALIA, 1968-69 TO 1970-71 (\$'000 f.o.b.)

	<i>Exports</i>			<i>Imports</i>		
	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
Gold—Bullion(a) . . .	22,706	29,367	18,199	3,964	6,709	3,620
Specie . . . . .	..	6	46	32	40	66
<i>Total gold</i> . . . . .	22,706	29,373	18,245	3,996	6,749	3,686
Silver—Bullion(a) . . .	22,677	14,006	12,380	212	156	108
Specie . . . . .	50	81	46	666	162	37
<i>Total silver</i> . . . . .	22,727	14,087	12,426	878	318	145
Other (including bronze and cupro-nickel)—Specie. .	759	1,255	586	1,008	1,320	92
Total—						
Australian Produce . . .	46,175	44,688	31,243	..	..	..
Re-exports . . . . .	17	27	14	..	..	..
<i>Grand total</i> . . . . .	46,192	44,715	31,257	5,882	8,387	3,923

(a) Includes matte.

The following table shows the exports and imports of bullion and specie to and from various countries during the year 1970-71.

#### EXPORTS AND IMPORTS OF BULLION AND SPECIE, BY COUNTRY OF CONSIGNMENT OR ORIGIN, 1970-71 (\$'000 f.o.b.)

<i>Country</i>	<i>Exports</i>			<i>Imports</i>		
	<i>Bullion</i>	<i>Specie</i>	<i>Total</i>	<i>Bullion</i>	<i>Specie</i>	<i>Total</i>
Fiji . . . . .	7	2	9	3,029	27	3,056
Germany, Federal Republic of . . .	..	2	2	5	..	5
Hong Kong . . . . .	17,696	..	17,696	..	..	..
Japan . . . . .	3,804	..	3,804	..	..	..
Malaysia . . . . .	..	137	137	..	..	..
New Zealand . . . . .	492	226	718	31	14	45
Papua New Guinea . . . . .	5	240	245	628	..	628
Singapore . . . . .	13	8	21	..	..	..
Solomon Islands . . . . .	..	15	15	..	..	..
Switzerland . . . . .	..	..	..	..	63	63
United Kingdom . . . . .	8,134	11	8,145	22	8	30
United States of America . . . . .	2	..	2	13	1	14
Other Countries . . . . .	426	37	463	..	11	11
Australia re-imported . . . . .	..	..	..	..	71	71
<i>Total</i> . . . . .	30,579	678	31,257	3,728	195	3,923



### Total import clearances, dutiable clearances, and net customs duties collected

The following table shows the value of total import clearances, total dutiable clearances, and the net customs duties collected during each of the years 1966-67 to 1970-71 together with the ratio of total dutiable clearances to total clearances.

#### TOTAL IMPORT CLEARANCES, DUTIABLE CLEARANCES, AND NET CUSTOMS DUTIES 1966-67 TO 1970-71

	1966-67	1967-68	1968-69	1969-70	1970-71
Total import clearances . . . \$'000	3,030,897	3,265,116	3,432,209	3,858,808	4,103,786
Total dutiable clearances . . . „	1,228,320	1,371,780	1,508,391	1,779,110	2,005,478
Total net customs duties collected . . . „	269,296	306,590	340,940	407,432	459,718
Ratio of dutiable clearances to total clearances . . . per cent	40.5	42.0	43.9	46.1	48.9
Ratio of duties collected to dutiable clearances . . . „	21.9	22.3	22.6	22.9	22.9

### Overseas trade in calendar years

For the purpose of comparison with countries which record overseas trade in calendar years, the following table has been compiled to show estimates of Australian exports and imports for each of the calendar years 1967 to 1971.

#### OVERSEAS TRADE IN CALENDAR YEARS, AUSTRALIA, 1967 TO 1971

(\$'000 f.o.b.)

Year	Merchandise		Non-merchandise		Total	
	Exports	Imports	Exports	Imports	Exports	Imports
1967 . .	3,004,232	3,082,991	101,181	47,108	3,105,413	3,130,099
1968 . .	3,036,221	3,443,943	112,227	45,143	3,148,448	3,489,086
1969 . .	3,615,710	3,573,713	155,469	52,800	3,771,179	3,626,513
1970 . .	4,125,779	3,997,992	129,752	56,492	4,255,531	4,054,484
1971 . .	4,484,222	4,089,008	128,125	50,806	4,612,347	4,139,814

## Excise

Although excise goods have no immediate bearing on overseas trade, the rate of excise duty is in some cases related to the import duty on similar goods. Moreover, as the Excise Acts are administered by the Department of Customs and Excise, it is convenient to publish here the quantities of Australian produce on which excise duty has been paid. Particulars of customs and excise revenue are shown in the chapter Public Authorities Finance. The following table shows the quantities of spirits, beer, tobacco, etc., on which excise duty was paid in Australia during the years 1969-70 and 1970-71.

QUANTITY OF SPIRITS, BEER, TOBACCO, ETC. ON WHICH EXCISE DUTY WAS PAID: AUSTRALIA, 1969-70 AND 1970-71

Article	1969-70	1970-71	Article	1969-70	1970-71
	'000 gallons	'000 gallons		'000 gallons	'000 gallons
Beer . . . . .	325,675	336,607	Petrol—		
	'000 proof gallons	'000 proof gallons	Aviation gasoline (by-law)(b) . . . . .	8,038	9,251
Spirits—			Aviation gasoline—Other(b) . . . . .	176	77
Brandy . . . . .	1,154	1,181	Gasoline(b) . . . . .	2,102,302	2,147,253
Gin . . . . .	274	265	<i>Total petrol.</i> . . . .	<i>2,110,516</i>	<i>2,156,581</i>
Whisky . . . . .	356	355	Mineral turpentine . . . . .	..	..
Rum . . . . .	507	514	Aviation turbine kerosene(b) . . . . .	143,612	156,861
Liqueurs . . . . .	111	101	Other kerosene . . . . .	..	..
Vodka . . . . .	160	173	Diesel fuel (as defined by By-law) . . . . .	191,119	207,567
Flavoured spirituous liquors . . . . .	23	46		doz packs	doz packs
Other . . . . .	1	..		'000	'000
<i>Total spirits (potable)</i> . . . . .	<i>2,585</i>	<i>2,635</i>	Playing cards . . . . .	136	136
				60 papers	60 papers
Spirits for—				or tubes	or tubes
Fortifying wine (a) . . . . .	3,261	644		'000	'000
			Cigarette papers and tubes . . . . .	56,132	59,224
Tobacco . . . . .	'000 lb 6,641	'000 lb 6,505		8,640	8,640
				matches	matches
Cigars . . . . .	173	160		'000	'000
			Matches . . . . .	3,656	3,513
Cigarettes—machine-made . . . . .	54,837	56,012		'000 gal	'000 gal
				(c)	(c)
			Grapewine for commercial purposes . . . . .	18,498	18,498
				'000 tons	'000 tons
			Coal . . . . .	34,955	37,499
				'000 doz	'000 doz
				containers	containers
			Canned fruit . . . . .	7,343	7,718

(a) Excise duty paid up to 19 August 1970. (b) Includes supplies to Commonwealth Government on which excise was paid. During the years 1969-70 and 1970-71 refunds were made on 61,592,000 gallons and 62,283,000 gallons, respectively. (c) Excise duty collected from 19 August 1970.

## PRIVATE OVERSEAS INVESTMENT

Surveys of overseas investment have been conducted since 1947-48 to obtain particulars of certain types of private capital flows to and from Australia. The surveys, when supplemented by other information, provide statistics of overseas investment in companies in Australia and in Australian public authority securities repayable in Australian currency, as well as statistics of Australian investment in companies overseas and in foreign government securities. Particulars of investment income from most of those classes of investment are also obtained from the surveys.

Certain types of private overseas investment are not included in the statistics which follow. Investment in real estate (except when made through companies) and loans between Australian individuals and non-resident individuals are not covered. Nor are changes in short-term liabilities between exporters and importers in Australia and overseas covered, except in so far as they arise from exports and imports between branches or subsidiaries and their home offices. In this case they are included in the figures of investment in branches or subsidiaries.

In the tables which classify investment in Australia according to country of origin, the investment is shown as an inflow from the country which is the immediate source of the capital. Income payable overseas is classified on a similar basis, i.e. it is classified to the country to which it is directly payable.

Remittances between Australia and overseas by Australian life insurance companies are regarded as capital transactions made to bring assets located in overseas countries into line with commitments in those countries, and are included as a flow of investment between Australia and overseas. Similar considerations apply to overseas life insurance companies with branches in Australia.

The following are explanatory notes relating to some of the terms used in the tables.

*Overseas.* For the purpose of these statistics, Papua New Guinea and the other external territories under the control of Australia are regarded as overseas countries.

*Companies.* In these statistics the term 'companies' relates to both incorporated and unincorporated businesses.

*Australian branches.* Australian branches of companies incorporated overseas whose net liabilities to home office or whose net profit or loss exceeds \$10,000, or which maintain in Australia a branch register of shares, debentures or unsecured notes.

*Australian subsidiaries.* For the purpose of these statistics an Australian subsidiary is a company in which there is ownership of 25 per cent or more of the company's ordinary shares (or voting stock) by one company or a group of associated companies in one overseas country, or ownership of 50 per cent or more of the company's ordinary shares (or voting stock) by individual persons or individual companies in one overseas country.

*Direct investment.* For the purpose of these statistics direct investment is overseas investment made through a branch or subsidiary (as defined above) by the overseas persons or overseas companies which hold the specified proportions of ordinary shares (or voting stock) in the subsidiary.

*Portfolio investment and institutional loans.* This term relates to investment other than direct investment, including loans raised overseas from financial institutions and other companies which have no direct investment in the borrowing company.

*Undistributed profits.* This term refers, in the case of Australian subsidiaries, to the equity of the overseas parent in the net earnings for taxation purposes of the Australian company, less tax (or tax provision) and less dividends declared. In the case of overseas subsidiaries of Australian companies, this term represents the equity of the Australian parent in the book value of the net earnings of the subsidiary after tax, less dividends paid or payable.

*Unremitted profits.* For these statistics this represents the net earnings of branches during the year, after tax, less remittances by the branches to their home offices during the year of net earnings (irrespective of the period to which the earnings relate). 'Net earnings' of Australian branches of overseas companies are, in general, based on the value of their income for taxation purposes.

The annual bulletin *Insurance and Other Private Finance* (5.15) and the *Annual Bulletin of Overseas Investment* (5.20) contain additional figures relating to overseas investment, including a longer range of years covered, and also a more detailed description of the figures.

**Private overseas investment in companies in Australia and investment income payable overseas by companies in Australia.**

The inflow of private overseas investment in Australia since 1966-67 is shown in the next three tables.

**INFLOW OF PRIVATE OVERSEAS INVESTMENT IN COMPANIES IN AUSTRALIA  
BY CATEGORY OF INVESTMENT AND TYPE OF COMPANY, 1966-67 TO 1970-71  
(\$ million)**

<i>Inflow of direct private overseas investment in companies in Australia</i>							
<i>Year</i>	<i>Australian branches</i>		<i>Australian subsidiaries</i>		<i>Total</i>	<i>Portfolio investment and institutional loans</i>	<i>Grand total</i>
	<i>Un-remitted profits</i>	<i>Other direct investment</i>	<i>Un-distributed profits</i>	<i>Other direct investment</i>			
1966-67 .	12	94	103	155	363	153	516
1967-68 .	34	110	194	223	561	401	962
1968-69 .	34	150	247	202	633	412	1,046
1969-70 .	40	151	244	355	790	291	1,080
1970-71 .	53	125	246	512	937	637	1,573



**INFLOW OF PRIVATE OVERSEAS INVESTMENT IN COMPANIES IN AUSTRALIA,  
BY COUNTRY OF INVESTOR AND CATEGORY OF INVESTMENT, 1966-67 TO 1970-71**  
(\$ million)

<i>Year</i>	<i>United Kingdom</i>	<i>U.S.A.</i>	<i>Canada</i>	<i>Japan</i>	<i>E.E.C.</i>	<i>Other countries</i>	<i>Total</i>
DIRECT INVESTMENT							
Undistributed income—							
1966-67 . . .	60	47	4	..	-3	6	115
1967-68 . . .	116	88	16	2	-1	8	228
1968-69 . . .	143	118	12	3	-2	8	281
1969-70 . . .	156	108	11	-2	2	9	283
1970-71 . . .	146	130	15	-3	4	9	300
Other direct investment—							
1966-67 . . .	33	157	5	7	13	33	248
1967-68 . . .	8	249	19	13	23	21	333
1968-69 . . .	80	188	8	15	31	30	352
1969-70 . . .	87	296	22	22	40	38	506
1970-71 . . .	169	234	11	60	44	119	637
PORTFOLIO INVESTMENT AND INSTITUTIONAL LOANS							
1966-67 . . .	27	78	6	42			153
1967-68 . . .	268	51	2	80			401
1968-69 . . .	265	37	5	106			412
1969-70 . . .	124	-1	-6	174			291
1970-71 . . .	257	132	17	230			637
TOTAL							
1966-67 . . .	120	282	15	98			516
1967-68 . . .	392	387	38	145			962
1968-69 . . .	488	343	24	191			1,046
1969-70 . . .	367	402	27	284			1,080
1970-71 . . .	572	496	43	463			1,573

Minus sign (-) denotes outflow.

**INFLOW OF DIRECT OVERSEAS INVESTMENT IN COMPANIES  
IN AUSTRALIA, BY INDUSTRY GROUP IN WHICH CAPITAL  
INVESTED, 1966-67 TO 1970-71**  
(\$ million)

<i>Year</i>	<i>Primary production</i>	<i>Manu- facturing</i>	<i>Other industries</i>	<i>Total</i>
1966-67 . . .	114	183	66	363
1967-68 . . .	176	224	161	561
1968-69 . . .	262	201	170	633
1969-70 . . .	259	232	299	790
1970-71 . . .	319	239	378	937

The next three tables show investment income payable overseas by companies in Australia.

**INVESTMENT INCOME PAYABLE OVERSEAS BY COMPANIES IN AUSTRALIA  
BY CATEGORY OF INCOME AND TYPE OF COMPANY(a), 1966-67 TO 1970-71**  
(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71
<b>Income payable on direct investment—</b>					
Australian branches—					
Unremitted profits . . . . .	12	34	34	40	53
Remitted profits and interest . . . . .	44	44	68	77	67
Australian subsidiaries—					
Undistributed profits . . . . .	103	194	247	244	246
Distributed profits—					
Dividends payable . . . . .	100	104	106	141	131
Interest remitted . . . . .	20	25	34	52	62
<i>Total, income payable on direct investment</i>	279	401	490	554	560
<b>Income payable on portfolio investment and institutional loans—</b>					
Dividends . . . . .	39	40	48	54	57
Interest . . . . .	19	22	32	36	45
<i>Total, income payable on portfolio investment, etc . . . . .</i>	58	62	81	91	103
<b>Grand total . . . . .</b>	<b>337</b>	<b>463</b>	<b>570</b>	<b>644</b>	<b>662</b>

(a) Excludes investment income payable overseas by life insurance companies.

**INVESTMENT INCOME PAYABLE OVERSEAS BY COMPANIES IN AUSTRALIA BY COUNTRY  
TO WHICH PAYABLE AND CATEGORY OF INCOME(a), 1966-67 TO 1970-71**  
(\$ million)

Year	United Kingdom	U.S.A.	Canada	Japan	E.E.C.	Other countries	Total
<b>DIRECT INVESTMENT INCOME</b>							
<b>Undistributed income—</b>							
1966-67 . . . . .	60	47	4	..	-3	6	115
1967-68 . . . . .	116	88	16	2	-1	8	228
1968-69 . . . . .	143	118	12	3	-2	8	281
1969-70 . . . . .	156	108	11	-2	2	9	283
1970-71 . . . . .	146	130	15	-3	4	9	300
<b>Distributed income on direct investment—</b>							
1966-67 . . . . .	90	60	2	..	2	11	164
1967-68 . . . . .	82	72	4	..	4	10	173
1968-69 . . . . .	87	95	6	(b)	(b)	13	208
1969-70 . . . . .	106	134	7	(b)	(b)	12	270
1970-71 . . . . .	113	113	7	5	7	15	260
<b>INCOME PAYABLE ON PORTFOLIO INVESTMENT AND INSTITUTIONAL LOANS</b>							
1966-67 . . . . .	26	17	1		15		58
1967-68 . . . . .	27	19	1		15		62
1968-69 . . . . .	36	24	1		19		81
1969-70 . . . . .	42	25	1		23		91
1970-71 . . . . .	44	25	1		32		103
<b>TOTAL</b>							
1966-67 . . . . .	175	124	7		31		337
1967-68 . . . . .	225	179	21		38		463
1968-69 . . . . .	266	237	19		48		570
1969-70 . . . . .	304	267	19		55		644
1970-71 . . . . .	303	269	23		68		662

(a) Excludes investment income payable overseas by life insurance companies. (b) Not available for publication.

## OVERSEAS TRANSACTIONS

**DIRECT INVESTMENT INCOME PAYABLE OVERSEAS BY COMPANIES  
IN AUSTRALIA, BY INDUSTRY GROUP IN WHICH CAPITAL INVESTED(a)  
1966-67 TO 1970-71  
(\$ million)**

<i>Year</i>	<i>Primary production</i>	<i>Manu- facturing</i>	<i>Other industries</i>	<i>Total</i>
1966-67 . . . .	29	171	79	279
1967-68 . . . .	54	225	122	401
1968-69 . . . .	88	230	171	490
1969-70 . . . .	108	255	190	554
1970-71 . . . .	156	239	165	560

(a) Excludes investment income payable overseas by life insurance companies.

**Australian investment in companies overseas and investment income receivable from companies overseas**

The outflow of Australian investment in companies since 1966-67 and a classification by country in which the capital was invested are shown in the following two tables.

**OUTFLOW OF PRIVATE AUSTRALIAN INVESTMENT IN COMPANIES OVERSEAS  
BY CATEGORY OF INVESTMENT AND TYPE OF COMPANY, 1966-67 TO 1970-71  
(\$ million)**

Year	Outflow of direct Australian investment in companies overseas						Portfolio investment and institutional loans(a)	Grand total	
	Overseas branches		Overseas subsidiaries		Total				
	Unre-mitted profits	Other direct investment	Undis-tributed profits	Other direct investment					
1966-67	.	.	-1	14	15	9	37	5	42
1967-68	.	.	2	7	18	21	47	1	48
1968-69	.	.	-1	13	21	35	68	3	71
1969-70	.	.	1	4	23	105	133	6	139
1970-71	.	.	1	8	26	38	72	12	88

(a) Excludes portfolio investment in Papua New Guinea other than some long-term trade credit.  
Minus sign (-) denotes inflow.

**OUTFLOW OF PRIVATE AUSTRALIAN INVESTMENT IN COMPANIES OVERSEAS  
BY COUNTRY IN WHICH CAPITAL INVESTED, 1966-67 TO 1970-71  
(\$ million)**

<i>Year</i>	<i>United Kingdom</i>	<i>New Zealand</i>	<i>U.S.A. and Canada</i>	<i>Papua New Guinea(a)</i>	<i>Other countries</i>	<i>Total</i>
1966-67 . . . .	4	8	4	18	7	42
1967-68 . . . .	6	8	2	21	10	48
1968-69 . . . .	15	14	1	35	5	71
1969-70 . . . .	32	13	5	79	10	139
1970-71 . . . .	1	21	9	40	14	85

(a) Excludes portfolio investment other than some long-term trade credit.

The next two tables show income from direct investment receivable by Australian companies from companies overseas, and the countries from which it is receivable.



**DIRECT INVESTMENT INCOME RECEIVABLE FROM OVERSEAS BY  
AUSTRALIAN COMPANIES, BY TYPE OF COMPANY AND CATEGORY  
OF INCOME(a), 1966-67 TO 1970-71**

(\$ million)

Year	Overseas branches		Overseas subsidiaries		Total
	Unre- mitted profits (net)	Remitted profits and interest	Undis- tributed profits (net)	Dividends and interest receivable	
1966-67.	-1	5	15	21	39
1967-68.	2	6	18	19	45
1968-69.	-1	5	21	24	49
1969-70.	1	5	23	26	55
1970-71.	1	5	26	27	58

(a) Details are not available of income receivable in Australia on either portfolio investment or on Australian holdings of overseas public authority securities.

**DIRECT INVESTMENT INCOME RECEIVABLE FROM OVERSEAS BY AUSTRALIAN  
COMPANIES, BY COUNTRY FROM WHICH RECEIVABLE(a), 1966-67 TO 1970-71**

(\$ million)

Year	United Kingdom	New Zealand	U.S.A. and Canada	Papua New Guinea(a)	Other countries	Total
1966-67	1	18	1	6	13	39
1967-68	3	18	1	9	14	45
1968-69	2	17	2	12	17	49
1969-70	4	16	1	16	17	55
1970-71	6	17	(b)	14	22	58

(a) Details are not available of income receivable in Australia on portfolio investment or on Australian holdings of overseas public authority securities. (b) Not available for publication—included in 'Other countries'.

**Net annual flow of investment**

The net annual flow of investment between Australia and overseas, and its classification by country, are shown in the following two tables. In addition to private overseas investment, the annual inflow of overseas investment in Australian public authority securities and net overseas remittances by life insurance companies have been incorporated in both tables.

**NET ANNUAL FLOW OF INVESTMENT BETWEEN  
AUSTRALIA AND OVERSEAS COUNTRIES  
1966-67 TO 1970-71**

(\$ million)

Year	Annual inflow of investment	Annual outflow of investment	Net annual flow
1966-67	539	39	500
1967-68	1,110	43	1,067
1968-69	1,182	60	1,122
1969-70	966	140	826
1970-71	1,523	105	1,418

**NET ANNUAL FLOW OF INVESTMENT BETWEEN AUSTRALIA  
AND OVERSEAS COUNTRIES, BY COUNTRY, 1966-67 TO 1970-71**  
(\$ million)

<i>Year</i>	<i>United Kingdom</i>	<i>U.S.A. and Canada</i>	<i>Other countries</i>	<i>I.B.R. D. (a)</i>	<i>Net annual flow</i>
1966-67	49	398	75	-23	500
1967-68	351	605	136	-23	1,067
1968-69	458	405	282	-24	1,122
1969-70	246	380	219	-20	826
1970-71	524	524	386	-16	1,418

(a) Particulars are not available of the domicile of securities issued to the International Bank for Reconstruction and Development.

Minus sign (-) denotes outflow.

### BALANCE OF PAYMENTS

Estimates of a country's balance of payments are prepared for the purpose of providing a systematic record in money terms of the economic transactions which take place over a period between that country and all other countries. Such records are essential to the examination of influences which external factors have on the domestic economy. The Australian economy is subject to fairly large fluctuations in export income, and it is also affected in important respects by variations in the level of foreign investment and the demand for imports. Consequently, these estimates have always assumed particular importance in this country.

Official estimates of Australia's balance of payments covering the period 1928-29 to 1930-31 were included in the Appendix to Year Book No. 24, 1931. Except for the war years (1939 to 1945), estimates have since been published annually. Detailed estimates are currently provided twice yearly in the form of a mimeographed publication *Balance of Payments* (8.1). This publication brings the estimates forward to the end of the most recent financial year or half-year and provides also a description of the various items included. A summarised statement of the principal current account items and capital movements is prepared and issued on a quarterly basis in the *Balance of Payments—Quarterly Summary* (8.2).

In the form of presentation adopted for the Australian balance of payments estimates a basic distinction is made between 'current account' and 'capital account' transactions. Current account transactions may be defined as those involving changes in the ownership of goods or the rendering of services between residents of Australia and the rest of the world and include such items as exports, imports, shipping freights, dividends, profits and interest, travel, and government expenditure. The current account also includes the value of transfers in the form of gifts in cash or kind made or received by residents of Australia, both private and government, to or from the rest of the world. Capital account transactions may be defined as those involving claims to money and titles of investment between residents of Australia and those of another country and include government loan-raising operations overseas, investment by overseas residents in Australian companies, the investment of Australian residents in companies overseas, and changes in the level of Australia's foreign reserves.

By definition, the balance of payments on current account and the balance of payments on capital account during a given period must exactly offset one another. Errors and omissions, however, occur in the estimation of the amounts involved in various items in both the current and capital accounts, and, in addition, there are differences in timing between the statistical recording of trade and invisible transactions and the corresponding foreign exchange transactions. It is therefore necessary to introduce into the estimates a 'balancing item' which allows the identity between the current and capital account balances to be preserved. The 'balancing item' is included in the capital account, but, as mentioned above, it includes discrepancies in the current account and does not, as is frequently supposed, include only errors, omissions and timing differences related to capital transactions.

Details of the estimates are assembled from a variety of sources of which the following are the more important: (i) statistics of exports and imports obtained from Australian trade statistics; (ii) details of the import valuation adjustment obtained from a sample of the invoices submitted to the Department of Customs and Excise in respect of imports into Australia; (iii) information on particular invisible current account items and capital movements obtained by regular inquiry from private organisations and government departments; (iv) details of receipts and payments of foreign exchange provided by the banking system; (v) information on profits remitted, undistributed income and private investment in companies provided by statistics of overseas investment collected by this

Bureau; (vi) information on freight on imports and other items concerned with overseas transportation obtained from a sample of the invoices submitted to the Department of Customs and Excise in respect of imports into Australia and from a survey conducted by this Bureau of overseas shipping and airline operations; and (vii) information supplied by the Reserve Bank of Australia on gold and net foreign assets of official and banking institutions.

### Current account

The balance of payments on current account is arranged to show a series of items for each of which there is a credit and/or a debit entry. In most cases the credit entries represent transactions in goods and services, property income, and transfers, which result in receipts of foreign exchange, while the debit entries represent similar transactions which result in payments of foreign exchange. Some entries which do not entail movements of foreign exchange are also included, the principal examples being those for undistributed income and transactions, mainly in goods, in which the payments due are subsequently capitalised. These amounts are treated as credits or debits in the relevant sections of the current account, and as corresponding outflows or inflows in non-monetary items in the capital account. Transfers in kind provide a further example of transactions which do not require a movement of foreign exchange. The values of transfers received or provided in kind are shown as credits or debits respectively.

The largest items shown in the current account are exports and imports, and the difference between them represents the balance of trade. This is usually the most variable relationship in the balance of payments and is, therefore, a most important one. *For balance of payments purposes, certain adjustments are made to the recorded trade statistics.* Briefly, these adjustments are made to exclude those transactions for which there is no change of ownership between residents and non-residents of Australia and to include certain transactions for which there has been a change of ownership but for which customs entries are not required. In addition, a valuation adjustment is made to the recorded import statistics in order to remove the overstatement which results from the basis of valuation for customs duty. A full description of the adjustments was provided in the Appendix to the publication *Balance of Payments, 1968-69*. A full evaluation of the overall position on current account, however, occurs only after the invisible items have been taken into account. In value terms the most important of these are the transportation items. Entries appear on both the debit and credit sides, the principal component on the debit side being freight payable overseas on imports into Australia. The principal component on the credit side is expenditure by overseas carriers, which represents mainly overseas ships' expenditure for stevedoring, port charges, etc. incurred in loading and discharging goods at Australian ports, and stores purchased in Australia. The items next in importance are those concerning income from property. Debit entries under this heading include dividends, profits, interest and royalties payable overseas, while the credit entries include similar details of amounts receivable by Australian residents. These items include undistributed income in respect of which, as mentioned above, no monetary movements occur. The remaining items are smaller than those mentioned above, and include travel, government transactions, transfers (including foreign aid made available by the Australian Government), and, on the credit side, the net value of Australian gold production.

### Capital account

In the capital account, transactions are recorded on a net basis; that is, according to the net effect of all debit and credit entries relating to each item. Thus entries on the credit side represent a net increase in non-residents' assets in Australia or a net decrease in Australian assets overseas, while debit entries represent a net decrease in non-residents' assets in Australia or a net increase in Australian assets overseas.

Capital account transactions are grouped according to the sector of the Australian party to the transactions. The government sector, therefore, includes all capital transactions of central, State, local and semi-government authorities with the exception of transactions of monetary institutions (which are included in the monetary sector), while the private sector covers transactions of all resident individuals and private institutions (again excepting monetary institutions). The monetary sector covers all banking institutions, including government-owned banks. Transactions of the monetary sector are further sub-divided into those of official and 'other' monetary institutions. Transactions of official institutions include changes in Australia's official reserve assets (consisting of gold, foreign exchange, the I.M.F. gold tranche and special drawing rights in the I.M.F.) and transactions between the Reserve Bank of Australia and foreign central monetary authorities and the I.M.F. Also included is an item, *18.4 Allocation of Special Drawing Rights*. This is the counterpart to the change in official reserve assets due to the allocation to Australia of S.D.R.s by the I.M.F. Such an entry is necessary in this case because without it there would be no corresponding credit to the increase in assets (debit) and the allocation would be reflected in an offsetting movement in the balancing item. 'Other' monetary institutions includes all other transactions of Australian monetary institutions.



In the government sector the most important items include transactions by non-residents in government securities domiciled overseas and in Australia and transactions involving changes in Australia's assets with and liabilities to international development institutions such as the International Bank for Reconstruction and Development and the Asian Development Bank. Other government transactions are largely a reflection of the net effect on the balance of payments of leads and lags between payments made overseas for items of equipment for the defence services or government airlines and the delivery of the equipment. In periods where payments exceed the value of deliveries a net debit results; in periods where the value of deliveries exceeds payments a net credit is recorded.

In the private sector the most important items are overseas investment in Australian companies, Australian investment overseas, and the transactions of marketing authorities. The figures for marketing authorities represent changes in the estimated value of commodity stocks held overseas by, or in amounts owed by overseas debtors to, the principal Australian marketing authorities.

In the monetary sector the most important item is that which shows the net change in Australia's official reserve assets.

The balancing item includes errors and omissions and timing differences, referred to on page 322.

#### Tables—Balance of payments

The following tables show, for the three years 1968–69 to 1970–71, particulars of:

- (i) the balance of payments; and
- (ii) the balance of payments by regions

#### BALANCE OF PAYMENTS: AUSTRALIA, 1968-69 TO 1970-71

(\$ million)

	1968-69		1969-70		1970-71	
	Credit	Debit	Credit	Debit	Credit	Debit
<b>CURRENT ACCOUNT</b>						
<b>Goods—</b>						
1 Exports f.o.b.(a)	3,217	..	3,967	..	4,216	..
2 Imports f.o.b.(a)	..	3,203	..	3,553	..	3,790
Balance of trade	14	..	414	..	426	..
<b>Invisibles—</b>						
3 Gold production	20	..	18	..	15	..
4 Transportation—						
4.1 Freight on imports(b)	..	377	..	397	..	409
4.2 Expenditure of overseas carriers	263	..	289	..	315	..
4.3 Other transportation	128	323	156	357	164	417
5 Travel	108	157	124	186	143	199
6 Government—						
6.1 Australian government—						
6.11 Defence expenditure	..	65	..	72	..	73
6.12 Other expenditure	..	46	..	52	..	54
6.13 Services to non-residents	39	..	40	..	26	..
6.2 Foreign governments' expenditure	41	..	48	..	55	..
7 Miscellaneous—						
7.1 Business expenses	46	65	63	80	87	106
7.2 Other	39	41	54	67	48	64
8 Property income—						
8.1 Direct investment—						
8.11 Undistributed	20	281	24	283	27	300
8.12 Distributed	29	209	31	270	32	260
8.2 Interest on government loans	..	83	..	90	..	88
8.3 Royalties and copyrights	7	63	7	68	6	64
8.4 Other	95	81	93	91	112	103
9 Government transfers—						
9.1 Papua New Guinea	..	106	..	116	..	123
9.2 Other foreign aid	..	54	..	64	..	62
10 Private transfers—						
10.1 Migrants' funds	125	29	136	41	130	49
10.2 Other	43	62	50	73	51	85
Balance on current account	..	1,024	..	760	..	820

For footnotes see next page.

BALANCE OF PAYMENTS: AUSTRALIA, 1968-69 TO 1970-71—*continued*  
(\$ million)

	1968-69		1969-70		1970-71	
	Credit	Debit	Credit	Debit	Credit	Debit
<b>CAPITAL ACCOUNT (NET)</b>						
<b>Government—</b>						
11 Government securities—						
11.1 Domiciled overseas . . . . .	138	..	..	131	..	47
11.2 Domiciled in Australia . . . . .	..	1	6	..	..	2
12 International development institutions(c)	..	10	..	7	..	7
13 Other government transactions . . . . .	..	57	..	53	..	8
<b>Private—</b>						
14 Overseas investment in Australian companies—						
14.1 Direct investment—						
14.11 Undistributed income . . . . .	281	..	283	..	300	..
14.12 Other . . . . .	352	..	506	..	637	..
14.2 Portfolio investment and institutional loans . . . . .	412	..	291	..	637	..
15 Australian investment overseas—						
15.1 Direct investment—						
15.11 Undistributed income . . . . .	..	20	..	24	..	26
15.12 Other . . . . .	..	48	..	108	..	46
15.2 Portfolio investment . . . . .	..	3	..	19	..	44
16 Other private investment . . . . .	11	..	11	..	12	..
17 Marketing authorities . . . . .	27	..	..	47	..	43
<b>Monetary—</b>						
18 Official monetary institutions—						
18.1 Changes in liabilities—						
18.11 Use of I.M.F. credit . . . . .	..	..	..	..	..	..
18.12 Other . . . . .	6	..	5	..	7	..
18.2 Changes in official reserve assets . . . . .	..	143	..	118	..	742
18.3 Other transactions . . . . .	14	..	8	..	3	..
18.4 Allocation of Special Drawing Rights . . . . .	..	..	75	..	64	..
19 Other monetary institutions—						
19.1 Changes in liabilities . . . . .	..	5	35	..	29	..
19.2 Changes in assets—						
19.21 Advances to non-residents . . . . .	..	1	..	1	..	1
19.22 Other foreign assets . . . . .	..	26	..	6	71	..
Balancing item . . . . .	96	..	54	..	28	..
<b>Balance on capital account . . . . .</b>	<b>1,024</b>	<b>..</b>	<b>760</b>	<b>..</b>	<b>820</b>	<b>..</b>

(a) The amounts shown represent the recorded trade figures adjusted for balance of payments purposes. Adjustments affect timing, coverage and valuation. (b) Freight payable overseas only. Total freight and insurance on imports, whether payable overseas or in Australia, is estimated at \$416 million in 1968-69, \$443 million in 1969-70, and \$461 million in 1970-71. (c) Subscription transactions only.

**BALANCE OF PAYMENTS BY REGIONS: AUSTRALIA 1968-69 TO 1970-71**  
**(\$ million)**

	1968-69	1969-70	1970-71
<b>CURRENT ACCOUNT(a)</b>			
<b>Exports f.o.b.(b)—</b>			
United States of America . . . . .	483	551	513
Canada . . . . .	67	112	105
United Kingdom . . . . .	416	483	485
European Economic Community . . . . .	448	496	453
Japan . . . . .	815	1,018	1,182
New Zealand . . . . .	152	189	222
Papua New Guinea . . . . .	82	128	144
Sino-Soviet Area . . . . .	149	217	168
Other countries . . . . .	605	773	946
<i>Total exports . . . . .</i>	<i>3,217</i>	<i>3,967</i>	<i>4,216</i>
<b>Imports f.o.b.(b)—</b>			
United States of America . . . . .	785	840	905
Canada . . . . .	143	140	153
United Kingdom . . . . .	693	774	800
European Economic Community . . . . .	387	462	519
Japan . . . . .	392	472	557
New Zealand . . . . .	72	81	90
Papua New Guinea . . . . .	20	20	22
Sino-Soviet Area . . . . .	49	53	53
Other countries . . . . .	664	711	692
<i>Total imports . . . . .</i>	<i>3,203</i>	<i>3,553</i>	<i>3,790</i>
<b>Invisibles (net)—</b>			
United States of America . . . . .	-319	-334	-297
Canada . . . . .	-25	-30	-37
United Kingdom . . . . .	-351	-388	-435
European Economic Community . . . . .	-98	-126	-154
Japan . . . . .	-1	-1	6
New Zealand . . . . .	5	9	4
Papua New Guinea . . . . .	-75	-81	-89
Sino-Soviet Area . . . . .	-6	-6	-7
Other countries . . . . .	-172	-219	-229
International agencies . . . . .	-18	-16	-25
Gold production . . . . .	20	18	15
<i>Total invisibles (net) . . . . .</i>	<i>-1,039</i>	<i>-1,174</i>	<i>-1,247</i>
<b>Balance on current account—</b>			
United States of America . . . . .	-621	-623	-690
Canada . . . . .	-101	-58	-85
United Kingdom . . . . .	-628	-679	-750
European Economic Community . . . . .	-37	-93	-219
Japan . . . . .	422	544	632
New Zealand . . . . .	85	118	136
Papua New Guinea . . . . .	-12	27	33
Sino-Soviet Area . . . . .	95	158	108
Other countries . . . . .	-230	-156	25
International agencies . . . . .	-18	-16	-25
Gold production . . . . .	20	18	15
<i>Total balance on current account . . . . .</i>	<i>-1,024</i>	<i>-760</i>	<i>-820</i>

For footnotes see next page.



BALANCE OF PAYMENTS BY REGIONS: AUSTRALIA 1968-69 TO 1970-71—*continued*  
(\$ million)

	1968-69	1969-70	1970-71
<b>CAPITAL ACCOUNT (NET)(a)</b>			
<b>Non-monetary sector—</b>			
<b>Government capital movements—</b>			
United States of America . . . . .	-17	-86	2
Canada . . . . .	..	3	-9
United Kingdom . . . . .	-4	-81	-30
European Economic Community . . . . .	114	12	-5
Japan . . . . .	..	..	..
New Zealand . . . . .	..	..	..
Papua New Guinea . . . . .	..	-5	-2
Sino-Soviet Area . . . . .	..	..	..
International development institutions . . . . .	-10	-7	-7
Other countries and international institutions . . . . .	-14	-16	-12
<i>Total government capital movements . . . . .</i>	<i>70</i>	<i>-185</i>	<i>-63</i>
<b>Overseas investment in Australian companies—</b>			
United States of America . . . . .	343	402	496
Canada . . . . .	24	27	43
United Kingdom . . . . .	488	367	572
European Economic community . . . . .	n.a.	n.a.	n.a.
Japan . . . . .	n.a.	n.a.	n.a.
New Zealand . . . . .	-6	21	10
Papua New Guinea . . . . .	-1	2	3
Sino-Soviet Area . . . . .	..	..	..
Other countries(c) . . . . .	197	261	450
<i>Total overseas investment in Australian companies . . . . .</i>	<i>1,046</i>	<i>1,080</i>	<i>1,573</i>
<b>Other capital movements—</b>			
United States of America . . . . .	1	1	-5
Canada . . . . .	1	-3	3
United Kingdom . . . . .	-10	-37	-14
European Economic Community . . . . .	n.a.	n.a.	n.a.
Japan . . . . .	n.a.	n.a.	n.a.
New Zealand . . . . .	-13	-12	-20
Papua New Guinea . . . . .	-34	-90	-58
Sino-Soviet Area . . . . .	17	-40	60
Other countries(c) . . . . .	5	-6	-113
<i>Total other private capital movements . . . . .</i>	<i>-33</i>	<i>-187</i>	<i>-148</i>
<b>Total non-monetary sector transactions—</b>			
United States of America . . . . .	327	317	492
Canada . . . . .	26	21	37
United Kingdom . . . . .	474	249	528
European Economic Community . . . . .	n.a.	n.a.	n.a.
Japan . . . . .	n.a.	n.a.	n.a.
New Zealand . . . . .	-18	9	-10
Papua New Guinea . . . . .	-35	-93	-57
Sino-Soviet Area . . . . .	17	-40	60
International development institutions . . . . .	-10	-7	-7
Other countries and international institutions(c) . . . . .	302	251	320
<i>Total non-monetary sector transactions . . . . .</i>	<i>1,082</i>	<i>709</i>	<i>1,362</i>
<b>Monetary sector transactions—</b>			
Official institutions(d) . . . . .	-123	-31	-668
Other(d) . . . . .	-31	28	99
Balancing item(d) . . . . .	96	54	28
<i>Total balance on capital account(d) . . . . .</i>	<i>1,024</i>	<i>760</i>	<i>820</i>

(a) For current account balances minus sign (-) denotes deficit; for capital account items minus sign (-) denotes an increase in overseas assets or a decrease in liabilities to overseas. (b) The amounts shown represent recorded trade figures adjusted for balance of payments purposes. Adjustments affect timing, coverage and valuation. (c) Including Japan and European Economic Community. (d) No regional split is available for these items.

**International reserves**

The following table shows the total gold and net foreign assets of official and banking institutions as at 30 June 1969, 1970, and 1971.

**GOLD AND NET FOREIGN ASSETS  
OFFICIAL AND BANKING INSTITUTIONS, 1969 TO 1971**

(Source: Reserve Bank of Australia)

(\$ million)

	30 June		
	1969	1970	1971
Official reserve assets—			
Gold . . . . .	231	241	227
Special Drawing Rights . . . . .	..	79	146
I.M.F. gold tranche . . . . .	204	217	186
Foreign exchange—			
United States dollars . . . . .	368	371	696
Sterling . . . . .	586	617	947
Others . . . . .	32	14	77
<i>Total . . . . .</i>	<i>1,420</i>	<i>1,538</i>	<i>2,280</i>
Other foreign assets (net) . . . . .	94	100	29
<i>Total . . . . .</i>	<i>1,514</i>	<i>1,638</i>	<i>2,309</i>

**INDEXES OF VALUES OF EXPORTS AND IMPORTS  
AT CONSTANT PRICES**

The following tables show annual indexes of the values of Australian exports and imports of merchandise at average 1966–67 prices. A description of these measures is given in the first issue of the bulletin *Exports and Imports of Merchandise at Constant Prices* (8.21) published on 10 October 1968.

**EXPORTS OF MERCHANDISE, 1961-62 TO 1970-71**

Indexes of Values at Average 1966-67 Prices

(Base: Year 1966-67 = 100)

	<i>Food and live animals</i>			<i>Total food and live animals</i>	<i>Wool and sheep-skins</i>	<i>Metal-liferous ores and metal scrap</i>	<i>Metal manu-factures machinery, transport equipment</i>	<i>Other exports</i>	<i>All exports of merchandise (a)</i>
	<i>Meat and meat preparations</i>	<i>Cereal grains and cereal preparations</i>	<i>Other (dairy produce, fruit, sugar, etc.)</i>						
Percentage of total value of exports in 1966-67(b)	9.5	15.8	12.5	37.8	29.7	5.6	14.2	12.7	100.0
1961-62 . . . . .	}			Not available					79
1962-63 . . . . .									77
1963-64 . . . . .									90
1964-65 . . . . .									89
1965-66 . . . . .									90
1966-67 . . . . .	100	100	100	100	100	100	100	100	100
1967-68 . . . . .	100	94	99	97	102	147	100	121	105
1968-69 . . . . .	98	80	102	92	107	211	116	147	114
1969-70 . . . . .	132	106	100	111	115	302	151	174	136
1970-71 . . . . .	135	146	109	131	105	385	156	189	148

For footnotes see next page

## IMPORTS OF MERCHANDISE, 1961-62 TO 1970-71

Indexes of Values at Average 1966-67 Prices

(Base: Year 1966-67 = 100)

	<i>Food, beverages, and tobacco</i>	<i>Fuels</i>	<i>Basic materials</i>	<i>Chemicals (including plastics)</i>	<i>Textiles, fabrics, etc.</i>	<i>Metal manu- factures, machinery, transport equipment</i>	<i>Other imports</i>	<i>All imports of merchan- dise(a)</i>
Percentage of total value of imports in 1966-67(b)	5.2	8.2	7.4	9.9	8.0	43.3	18.0	100.0
1961-62 . . . }								61
1962-63 . . . }								73
1963-64 . . . }								81
1964-65 . . . }								98
1965-66 . . . }								98
			Not available					
1966-67 . . .	100	100	100	100	100	100	100	100
1967-68 . . .	99	100	107	109	107	111	111	109
1968-69 . . .	110	105	106	123	114	116	121	116
1969-70 . . .	116	111	112	132	122	127	137	126
1970-71 . . .	120	81	108	145	127	133	152	130

(a) The series shown for years prior to 1966-67 are not strictly comparable to the series shown from 1966-67 onwards (see the bulletin referred to in the headnote to these two tables). (b) These percentages may be used in analysing the contribution of each group to movements in the total index.





## CHAPTER 12

# TRANSPORT, COMMUNICATION AND TRAVEL

The statistics in this chapter relate in the main to the year 1970–71, with comparisons restricted to a few recent years. More detailed figures and particulars for earlier years are included in the annual bulletins, *Transport and Communication* (14.11), *Public Authority Finance—Commonwealth Authorities* (5.12), and *Public Authority Finance* (5.33), and in the annual mimeographed statement *Motor Vehicle Registrations* (14.1). Current information on subjects dealt with in this chapter appears in the *Quarterly Summary of Australian Statistics* (1.3), the *Monthly Review of Business Statistics* (1.4), the *Digest of Current Economic Statistics* (1.5), *Overseas Shipping Cargo* (monthly) (14.10), *Motor Vehicle Registrations* (quarterly) (14.2), two preliminary monthly statements *Registrations of New Motor Vehicles* (14.6) (14.8), two quarterly bulletins *Road Traffic Accidents involving Casualties* (14.9) (14.14), *Road Accident Fatalities* (monthly) (14.13), and *Overseas Arrivals and Departures* (monthly and quarterly) (4.3) (4.1). Greater detail on the latter subject is contained in the annual bulletin *Demography* (4.9).

Information additional to that contained in Bureau publications is available in the annual reports and other statements of the Department of Shipping and Transport, the various harbour boards and trusts, the several Government railway authorities, the Department of Civil Aviation, the Postmaster-General's Department, the Overseas Telecommunications Commission, the Australian Broadcasting Control Board, and the Australian Broadcasting Commission.

## THE AUSTRALIAN TRANSPORT ADVISORY COUNCIL

In April 1946, the State and Federal Governments agreed to establish a co-ordinating and advisory committee at Ministerial level to review annually the various laws and regulations deemed necessary to safeguard the interests of the State Governments and road users generally and to consider matters of transport policy.

The Australian Transport Advisory Council (A.T.A.C.) thus established is comprised of the Commonwealth Minister for Shipping and Transport as Chairman, the Commonwealth Minister for the Interior, 'responsible for transport in the Australian Capital Territory and the Northern Territory) and each State Minister for Transport.

The Council primarily considers policy matters relating to transport operations, co-ordination and development. Its functions are: to initiate discussion and report to the respective Governments as necessary on any matter raised by the Council, or any State or Commonwealth Government Authority; generally to exercise its purely advisory functions, and to report as necessary to the respective Governments concerned in any matter which will tend to promote a better co-ordination of transport development, while at the same time encouraging modernisation and innovation to meet changing needs; and to assist in maintaining continuous and comprehensive research in relation to transport development in Australia and abroad; such research to be carried out for the benefit of Australian Transport authorities and agencies.

The regulation of, and the executive responsibility for transport is shared concurrently between the Commonwealth and State Governments. A.T.A.C. is the meeting ground of Commonwealth and States at a Ministerial level and provides an effective means for inviting discussion and reaching uniformity of approach towards transport administrative procedures and policy. It also provides a means for reviewing and discussing national solutions of pressing transport problems and the rectification of transport deficiencies generally. The Council has been active in: the establishment of special committees and conferences to examine and report on specific problems such as road safety, motor vehicle standards, safety features in motor vehicles, transport economic research, highway planning, level crossing accidents, blood tests for road users, driver improvement, pedestrian behaviour, etc.; the exchange of views and formulation of common policies on a wide range of transport matters; effecting at ministerial level Commonwealth-State and interstate co-operation on such matters as construction and operation of interstate railway links, collection of fines and fees interstate, policing of regulations, etc.; and the publication of comprehensive surveys of Australian transport.

Typical of matters A.T.A.C. has examined from time to time are the following: the effect of standardisation of railway gauges on other modes of transport; advanced national policies of road development and research; transport in relation to interstate tourist traffic; standardisation of traffic signs and road signs; standard and improved statistical data relating to transport of passengers and goods; uniform road traffic laws and standards for motor vehicle design and equipment; pipelines as a transport medium; and containerisation and the need for uniform legislation, particularly in relation to maximum weights of road vehicles.

#### Advisory Committees established by the Australian Transport Advisory Council

Some of the Council's most useful work has been accomplished through the agency of committees established by the Council from time to time. Some advisory committees are of a semi-permanent nature. They were established to initiate discussion and action on transport problems referred by member Ministers and other authorities and to undertake specialised work. These committees meet at regular intervals and report to A.T.A.C. through the Council's *Standing Committee of Advisers*, which comprises heads of Ministerial Departments or their deputies, under the chairmanship of the Secretary, Department of Shipping and Transport.

The administration of the Council and its committees is the responsibility of the Commonwealth Department of Shipping and Transport.

The general practice is that the Council convenes twice a year, and more frequently if the need arises. The meetings move successively from one State or Territory to another, and are usually held in one of the chambers of the State or Commonwealth Parliaments or the Northern Territory Legislative Council. Ministers are usually accompanied by officials and advisers.

Details of the advisory committees at present established, including their composition and function, are set out hereunder.

*The Advisory Committee on Safety in Vehicle Design* comprises an ergonomics expert, a medical practitioner, a traffic expert, a research engineer, a mechanical design engineer, a body design engineer, a production engineer, an officer from the Vehicle Structures Safety Branch of the Department of Shipping and Transport, and a nominee of the Standing Committee of Advisers. The Chairman is an officer of the Department of Shipping and Transport.

The Committee's function is to advise on safety standards in respect of motor vehicles. Recommendations to A.T.A.C. are submitted in the form of Australian design rules for motor vehicle safety, which set out detailed technical specifications of each safety feature, and include appropriate dates of implementations for various classes of vehicles.

Design rules endorsed by the Council up to February 1972 cover the following:

Reversing signal lamps	Glare reduction in field of view
Door latches and hinges	Rear vision mirrors
Seat anchorages for motor vehicles	Demisting of windscreens
Seat belts	Windscreen wipers and washers
Seat belt anchorage points	Location and visibility of instruments
Direction turn signal lamps	Safety rims
Hydraulic brake hoses	Instrument panels
Safety glass	Head restraints
Standard controls for automatic transmissions	Anti-theft locks
Steering columns	Vehicle engine emission control
Internal sun visors	New pneumatic passenger car tyres
	Tyre selection

A publication *Australian Design Rules for Motor Vehicle Safety*, incorporating design rules endorsed by the Council, is issued by the Department of Shipping and Transport. Amendments and additions are also issued by that Department.

*The Advisory Committee on Vehicle Performance* comprises a freight operator, a passenger operator, a motor vehicle design engineer, a private road user, an official of the Transport Worker's Union of Australia, a bus expert, nominees of the National Association of Australian State Road Authorities and the Society of Automotive Engineers (Australia), and an official from each State and Territory, nominated by the respective member Ministers of A.T.A.C. The Chairman is an officer of the Department of Shipping and Transport.



The function of the Committee is to advise on the on-road standards and equipment of vehicles and their loads. Many of its recommendations to A.T.A.C. are in the form of draft regulations which detail minimum standards for most aspects of vehicle construction and operation, and are recommended for adoption in the legislation of the States and Territories.

A publication *Draft Regulations Defining Vehicle Construction, Equipment and Performance Standards for Road Vehicles*, incorporating provisions endorsed by the Council, is issued by the Department of Shipping and Transport, which also provides an amendment service.

The *Advisory Committee on Road User Performance and Traffic Codes* comprises a transport operator, a private road user, a lawyer, a medical practitioner, a representative of vehicle manufacturers, an official of the Transport Worker's Union of Australia, and an official from each State and Territory, nominated by the respective member Ministers of A.T.A.C. The Chairman is an officer of the Department of Shipping and Transport.

The Committee's function is to review and advise on the ways of achieving improvement in road user performance and to advise on the uniform National Road Traffic Code. Many of the Committee's recommendations to A.T.A.C. are in the form of model traffic laws, which are recommended for adoption in the legislation of the States and Territories.

A document *The National Road Traffic Code*, incorporating model regulations endorsed by the Council, is published by the Department of Shipping and Transport, which also provides an amendment service.

In addition to traffic laws proper, the Committee has dealt with allied subjects such as driver licensing, medical fitness standards, the uniform number plates scheme, the scheme for visiting motorists, United Nations Conventions on road traffic and uniform accident reporting.

The *Advisory Committee on the Transport of Dangerous Goods* comprises seven Commonwealth and eight State representatives, as well as one representative from the Australian Road Transport Federation, one representative from the Australian Chemical Industry Council and one from the Standards Association of Australia. The Chairman is an officer of the Department of Shipping and Transport.

The function of the Committee is to advise on a uniform code relating to the transport of dangerous goods, and it has prepared a model code relating to the classification, labelling and transport of dangerous goods within Australia.

The *Publicity Advisory Committee on Education in Road Safety* comprises the Secretary/Managers of State and Territory Road Safety Councils. The Chairman is an officer of the Department of Shipping and Transport.

The Committee's function is to advise on publicity and education in road safety. The Committee co-ordinates and makes recommendations on publicity and education campaigns throughout the States and Territories.

*Ad hoc advisory committees.* Advisory committees of an ad hoc nature are created as the need arises. Examples are: the Air Pollution Committee, the Air Cushion Vehicle Committee and the Study Team on Transport Costs.

## SHIPPING

### Control of shipping

#### Commonwealth navigation and shipping legislation

For an outline of the development and scope of Commonwealth legislation, *see* Year Book No. 55, pages 366-7.

*Commonwealth Acts connected with shipping* are: the *Navigation Act* 1912-1970, the *Sea Carriage of Goods Act* 1924, the *Seamen's Compensation Act* 1911-1971, the *Seamen's War Pensions and Allowances Act* 1940-1971, the *Pollution of the Sea by Oil Act* 1960-1965, the *Australian Coastal Shipping Commission Act* 1956-1969, the *Australian Coastal Shipping Agreement Act* 1956, the *Stevedoring Industry Act* 1956-1971, the *Beaches, Fishing Grounds and Sea Routes Protection Act* 1932-1966 the *Submarine Cables and Pipelines Protection Act* 1963-1966 the *Lighthouses Act* 1911-1970 and the *Explosives Act* 1961-1966.

### Australian Coastal Shipping Commission

The Commission was established in 1956 for the purpose of maintaining and operating inter-state, overseas and territorial shipping services. It operates The Australian National Line, a Commonwealth-owned merchant shipping service which at 31 December 1971 comprised thirty ships with a total deadweight of 395,853 tons. The total included one large bulk carrier on charter from a foreign owner.

The fleet included the 9,330 ton (deadweight) vehicle deck/container ship *Australian Enterprise* and the 26,420 ton (deadweight) cellular container ship *Australian Endeavour*, both in overseas trade; three vehicle deck/passenger ships, *Empress of Australia* 12,037 tons gross, *Australian Trader* 7,005 tons gross, and *Princess of Tasmania* 3,981 tons gross; four vehicle deck cargo ships totalling 14,919 deadweight tons; one container/ore carrier of 11,900 deadweight tons in the Darwin trade; three bulk carriers in the 50,000 ton (deadweight) class; fifteen other bulk carriers totalling 157,898 deadweight tons; one 3,400 deadweight tons cellular container ship; and one conventional general cargo ship of 6,425 deadweight tons.

At 31 December 1971 the Commission had on order from an Australian shipyard two vehicle deck steel carriers of 7,500 deadweight tons each.

Overseas, a 26,000 ton (deadweight) cellular container ship was on order from a West German yard for the Australia-East Coast of North America trade. In addition, A.N.L. is a member of P.A.D. Shipping Australia Pty Ltd, and operates the *Allunga*, a 20,300 deadweight tons roll-on/roll-off vessel in the Australia-West Coast of North America trade.

To service the Line's vehicle deck ships and container/ore carriers, terminals have been established at fifteen ports: Adelaide in South Australia; Melbourne and Geelong in Victoria; Burnie, Devonport, Bell Bay and Hobart in Tasmania; Sydney and Port Kembla in New South Wales; Brisbane, Rockhampton (Port Alma), Mackay, Townsville and Cairns in Queensland; and Darwin in the Northern Territory.

In the year ending 31 December 1971 the vehicular/passenger vessels *Empress of Australia*, *Australian Trader* and *Princess of Tasmania* carried a total of 123,913 passengers and 31,882 passengers' cars between the mainland and Tasmania. Over the same period over 8.6 million tons of cargo were carried by The Australian National Line vessels.

### Australian Shipbuilding Board

Established in March 1941 as a wartime measure under the National Security (Shipbuilding) Regulations and constituted in 1948 under the *Supply and Development Act* 1939-1948, the Board from 1951 has operated under the control of the Minister for Shipping and Transport. In November 1963 it became a division of the Department of Shipping and Transport. The Division's staff numbers 130 including naval architects, engineers, technical, and administrative staff.

The Board consists of a Chairman, and four Members, one of whom is also a Member of the Naval Board. Members are appointed by the Minister for Shipping and Transport.

The functions of the Board are to advise the Minister on matters concerning the shipbuilding industry including the consideration of tenders for ships to be built in Australia, the prices at which vessels may be purchased and sold on behalf of the Commonwealth, and the state and prospects of the industry generally.

To 31 December 1971 the Board had arranged for the construction of 222 vessels valued at approximately \$611 million.

The Board has arranged for the construction of specialised craft such as an oil drilling rig, dredgers of various types, off-shore drilling service vessels, floating cranes, as well as bulk carriers, oil tankers, container ships and roll-on/roll-off vessels.

Orders held by the Board at 31 December 1971 were valued at \$166 million and numbered twenty-seven vessels. These included three tankers of approximately 24,000 tons deadweight, two of 62,000 tons deadweight, two dredgers, two product carriers of 14,400 tons deadweight, one large ore carrier of 78,000 tons deadweight, four offshore supply vessels, one tug, two cargo vessels of 6,500 tons deadweight, two vehicle-deck vessels of 7,600 tons deadweight, seven landing craft, and one small launch.

There are five major Australian shipyards building merchant vessels—two in Queensland, two in South Australia, and one in New South Wales; and two shipyards engaged principally in naval shipbuilding—one in New South Wales and one in Victoria. There are also numerous small yards, situated in every State, building smaller steel, wooden, aluminium and fibre-glass working and pleasure craft.



*Shipbuilding subsidy.* The Australian shipbuilding industry has been subsidised since 1947, and following the 1963 Tariff Board inquiry into measures of assistance to the Australian shipbuilding industry, the Government decided to extend the shipbuilding subsidy at its existing rate of up to one-third of the cost of construction to include all types of vessels of 200 tons gross and over built in recognised shipyards and intended for use in Australian coastal or inland waterways. This came into effect on 20 May 1964. In respect of vessels of less than 200 tons gross, Australian shipbuilders are afforded protection under the Customs Tariff.

The Tariff Board again inquired into the Australian shipbuilding industry during 1969. The report and recommendations arising from the inquiry have been submitted to the Government.

#### **Australian Stevedoring Industry Authority**

In March 1947 legislation established a permanent Stevedoring Industry Commission to continue in peace-time the functions performed during the war by the Commission established under National Security legislation. In June 1949 legislation was enacted to abolish the Stevedoring Industry Commission, on which employers and employees were represented, and establish in its place a Stevedoring Industry Board of three members, to attend to administrative matters formerly under the control of the Commission, such as the operation of labour bureaux at ports, payment of attendance money and provision of amenities. The industrial functions which previously came within the province of the Commission were assigned to a single Judge of the Commonwealth Court of Conciliation and Arbitration. In August 1956, following a Committee of Inquiry into the stevedoring industry, the Stevedoring Industry Board was replaced by the Australian Stevedoring Industry Authority of three members, including a representative of the management side of industry and a representative of the trade union movement. At the same time the judicial and non-judicial functions formerly exercised by the Commonwealth Court of Conciliation and Arbitration were divided between the Commonwealth Industrial Court and the Commonwealth Conciliation and Arbitration Commission respectively. Awards of the Conciliation and Arbitration Commission subsequently placed payment of sick pay, public holiday pay and annual leave under the administration of the Authority. Under amending legislation, which operated from 6 June 1961, the Authority became responsible for payment of long service leave to registered waterside workers, and its disciplinary powers were strengthened to reduce the time lost through unauthorised stoppages. Further amending legislation which operated from 8 October 1965 made the Authority responsible for the recruitment of waterside workers. In July 1970, by legislative amendment, the management and union positions on the Authority were abolished. The functions of the Authority are now exercised by one full-time Director.

In October 1965 the Government invited the Australian Council of Trade Unions, the Waterside Workers' Federation of Australia, the Association of Employers of Waterside Labour, the Australian Stevedoring Industry Authority and the Department of Labour and National Service to confer under the Chairmanship of Mr A. E. Woodward, Q.C., with the overall objective of improving the long-term conditions in the stevedoring industry. Following a series of meetings, the Conference, known as the National Stevedoring Industry Conference, published a General Report in April 1967 recording agreement between the parties on a number of matters. These included *inter alia* weekly hire for all registered waterside workers in major ports, together with a pension scheme and provision for reducing the statutory retirement age progressively from seventy to sixty-five years of age. Special arrangements have been agreed to cover any prospective redundancy problems. Following adoption of the Report by all the parties, including the Government, enabling legislation was introduced to allow the changes to be implemented. Permanent employment was commenced in Sydney on 27 November 1967, in Melbourne, Port Kembla, Adelaide, Fremantle and Brisbane on the respective dates, 8 January, 19 February, 4 March, 18 March, and 12 August 1968, in Newcastle on 10 March 1969 and Whyalla on 6 July 1970. Other appropriate ports will follow progressively. To enable the permanency arrangements to continue beyond 1 July 1970, the operation of the *Stevedoring Industry (Temporary Provisions) Act 1967-1968* was extended until 1 July 1972.

In July 1970 the National Stevedoring Industry Conference was given statutory backing and re-designated the Stevedoring Industry Council. The Council is constituted along the same lines as the National Stevedoring Industry Conference. Its functions are primarily to advise the Minister for Labour and National Service on the operation of the existing employment arrangements, the development of new employment schemes and such other matters as the Minister might refer to it. It is also required to endeavour to bring about amicable agreement in relation to industrial questions in the industry.

The statutory provisions relating to the industry are now contained in the *Stevedoring Industry (Temporary Provisions) Act 1967-1970* (and Regulations made thereunder), the *Stevedoring Industry Act 1956-1971*, and Division 4 of Part III. of the *Conciliation and Arbitration Act 1904-1970*.



**Trade Practices Act 1965-1969 (Part XA—Overseas Cargo Shipping)**

The Overseas Cargo Shipping provisions of the Trade Practices Act are administered by the Minister for Trade and Industry.

The object of the Overseas Cargo Shipping provisions is the control of the operations of shipping conferences (associations into which shipowners have traditionally combined) and of individual shipowners in relation to the carriage of goods by sea from Australia to other countries. To achieve that object the provisions are designed to facilitate negotiations between shipowners and shipper bodies (associations, designated by the Minister, that represent the interests of producers and shippers in Australia of goods exported from Australia).

Regarding shipping conferences, the provisions require certain agreements of a specified character between shipowners operating in the outward trades from Australia to be filed with the Clerk of Shipping Agreements. A shipowner who is a party to such an agreement may be requested, by the Minister, to give to the Minister an undertaking to negotiate with a shipper body with regard to the arrangements for, and the terms and conditions that are applicable to, cargo shipping to which the agreement relates. Whether such a shipowner has failed so to negotiate or whether the services provided pursuant to the agreement are adequate, efficient or economical, are matters that may be referred by the Minister for enquiry and report by the Trade Practices Tribunal. Certain powers are vested in the Governor-General to disapprove the agreement after consideration of a report by the Tribunal to the Minister. A probable effect of such a disapproval would be to force a shipowner party to the agreement to carry on its business in the absence of any agreement with other shipowners. The Governor-General may, however, in his discretion approve such a shipowner entering into another agreement.

Provisions, similar to the provisions in respect of shipping conferences, apply in respect of individual shipowners. In addition, an individual shipowner may, as a result of a declaration by the Governor-General, be prohibited from engaging in certain specified activities in carrying on its business, for example engaging in freight cutting with the object of substantially damaging the business of another shipowner.

Since the Act came into force two shipper bodies have been designated by the Minister—the Australia to Europe Shippers Association and the Singapore/West Malaysia Shippers Association. Shippers are in the process of forming additional bodies in respect of other trades.

The provisions also secure rights for Australian flag operators in respect of the operation of their vessels in the trades from Australia.

## **Collection and presentation of statistics**

### **Basic documents**

From July 1966 shipping statistics have been compiled by the Commonwealth Bureau of Census and Statistics from returns submitted by shipping companies or their representatives to Customs Houses at the various seaports throughout Australia. A return is required for the departure of a vessel from a port as well as for its arrival at that port and shows the following details:

- name of the port at which the return is submitted;
- name of vessel;
- type of shipping service (liner, tramp, bulkship, tanker);
- port registered;
- registered net tonnage;
- last port of call (arrival) or next port of call (departure);
- with cargo or in ballast;
- date of arrival or date of departure;
- ports of loading of cargo (arrival) or ports of discharge of cargo (departure);
- quantity of cargo for each port of loading or discharge.

Prior to July 1966, returns were completed by officers of the Department of Customs and Excise at each port, the major differences then being that the system did not, in the main, rely on information supplied direct by shipping companies or their representatives, and the detail on returns did not include information on type of shipping service or ports of loading and discharge of cargo.

### Scope of the statistics

Arrivals and departures of vessels are treated separately in shipping statistics. Not all vessels are included in the statistics as returns are not required for (i) naval vessels; (ii) yachts and other craft used for pleasure; (iii) foreign fishing vessels that neither load nor discharge cargo; (iv) Australian registered fishing vessels operating from Australian ports; (v) geographical survey vessels, seismic survey vessels, oceanographic survey vessels; (vi) offshore oil drilling rigs and vessels servicing them; (vii) vessels of 200 registered net tons and under.

### Period covered by the statistics

Monthly shipping statistics relate to vessels arriving at and departing from each port in a calendar month. Annual statistics are published on a financial year basis.

### Statistics of vessels

Statistics of vessels are compiled in terms of registered net tonnages. Net tonnage is expressed in units of 100 cubic feet (i.e. 100 cu ft equals 1 ton) and represents the volume of enclosed space which can be utilised for cargo or passengers.

### Statistics of vessel movements

Returns show the last or next port of call of a vessel according to whether an arrival or departure at a port is being reported. Each vessel is classified to either the overseas or the coastal fleets serving Australia. This information, supplemented by the voyage of the vessel indicated by ports it visits to load or discharge cargo, is the basis on which each vessel movement is allocated to one of the following classifications: overseas direct; overseas via other States; interstate direct; interstate via ports in the same State; intrastate.

### Cargo loaded or discharged

Returns for arrivals show cargo discharged, and for departures cargo loaded, in terms of units of weight or in terms of units of measurement, depending on the basis on which freight is charged. A ton measurement is a unit of 40 cubic feet. Cargo statistics show separate figures for cargo recorded in tons weight and cargo recorded in tons measurement.

### Type of service

Overseas shipping cargo statistics are classified by type of service. Coastal shipping cargo statistics, on the other hand, combine all service types.

For overseas shipping, cargo shipped in liners is shown separately from cargo shipped in tramps, bulkships and tankers. A liner is a vessel which, on the voyage on which cargo is loaded or discharged at an Australian port, is operated by a common carrier in providing services on a specified route on a relatively regular basis.

Statistics of cargo shipped in liner services do not necessarily provide a measure of cargo carried by ships operating under shipping conference arrangements. For example, liner services may be provided by shipping companies which are not parties to conference agreements. Cargo may also be shipped under shipping conference conditions in vessels operating on a voyage charter basis for specific cargo, and, in the statistics, such cargo is classified as cargo shipped in tramp vessels.

### Country of loading or discharge of overseas cargo

In statistics of overseas shipping cargo, country of loading or discharge of cargo is the country of location of the port where the cargo was loaded on to, or is to be discharged from, a reporting vessel. The countries shown are not necessarily the countries of origin or ultimate destination of cargo because previous or subsequent transshipments of cargo are not taken into account. The statistics of cargo classified by the country in which it was loaded or discharged cannot therefore be compared directly with statistics of overseas trade classified by country of origin or consignment.

### Transshipments of cargo within Australia

The State of loading or discharge shown in the statistics is the State in which cargo is loaded onto, or discharged from, reporting vessels. Cargo loaded in a given State can therefore include cargo previously shipped interstate, while cargo discharged can include cargo which would subsequently be shipped interstate.

## Overseas shipping

## Total movement

The following table shows the number of entrances and clearances (combined) of vessels from and to overseas countries, and the aggregate net tonnage, during each of the years 1966-67 to 1970-71.

**OVERSEAS SHIPPING: ENTRANCE AND CLEARANCES (COMBINED) OF  
VESSELS DIRECT, AUSTRALIA 1966-67 TO 1970-71(a)**

	1966-67	1967-68	1968-69	1969-70	1970-71
Number of vessels . . . .	7,994	7,985	8,750	10,022	11,054
Net tonnage . . . '000 tons	55,062	60,387	72,578	89,058	102,219

(a) Excludes vessels of 200 net tons and under.

Particulars of the total overseas movement of shipping for each year from 1822 to 1920-21 were published in Year Book No. 15, page 507, those for each year from 1921-22 to 1950-51 in Year Book No. 40, page 97, while those for each year from 1941-42 are shown in the Statistical Summary of this Year Book.

## Total overseas shipping

The following table shows, for each State and the Northern Territory, the number of entrances and clearances of vessels direct from and to overseas countries, and the aggregate net tonnage, during the year 1970-71.

**OVERSEAS SHIPPING: ENTRANCES AND CLEARANCES OF VESSELS DIRECT, STATES  
AND NORTHERN TERRITORY, 1970-71(a)**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances . . . number	1,446	492	1,150	290	1,807	110	181	5,476
'000 net tons	12,095	2,892	8,790	2,386	22,704	952	1,001	50,820
Clearances . . . number	1,196	586	1,338	352	1,857	99	150	5,578
'000 net tons	10,289	4,842	9,805	2,086	22,537	1,010	830	51,399

(a) Excludes vessels of 200 net tons and under.

## Country of registration of overseas shipping

Particulars of overseas shipping which entered Australian ports during each of the years 1968-69 to 1970-71 are given in the following table according to country of registration of vessels.

**OVERSEAS SHIPPING: ENTRANCES DIRECT, BY COUNTRY OF REGISTRATION OF VESSELS  
AUSTRALIA, 1968-69 TO 1970-71(a)**

('000 net tons)

<i>Vessels registered at ports in—</i>	1968-69	1969-70	1970-71	<i>Vessels registered at ports in—</i>	1968-69	1969-70	1970-71
Australia . . . . .	235	490	446	Panama . . . . .	880	1,134	1,156
Denmark . . . . .	669	555	569	Sweden . . . . .	771	724	1,027
France(b) . . . . .	503	788	552	United Kingdom . . . . .	7,899	8,923	8,632
Germany, Federal Republic of . . . . .	462	1,068	952	United States of America . . . . .	250	300	394
Greece . . . . .	1,672	2,493	3,953	Other countries . . . . .	1,244	2,441	2,851
Hong Kong . . . . .	228	360	459				
India . . . . .	444	459	692	All countries—			
Italy . . . . .	681	663	694	In cargo . . . . .	19,592	20,043	17,571
Japan . . . . .	7,377	9,640	11,868	Proportion of total % . . . . .	53.8	45.0	34.6
Liberia . . . . .	7,419	8,570	10,543	In ballast . . . . .	15,827	24,452	33,249
Netherlands . . . . .	1,043	1,280	1,078	Proportion of total % . . . . .	46.2	55.0	65.4
New Zealand . . . . .	322	330	337				
Norway . . . . .	4,320	4,277	4,617	Grand total . . . . .	36,419	44,495	50,820

(a) Excludes vessels of 200 net tons and under.

(b) Includes New Caledonia, 3 during 1968-69, and 9 during 1969-70.

Australian registered tonnage which entered Australian ports from overseas during the year 1970-71 represented 0.88 per cent of the total tonnage entered.



### Interstate shipping

#### Interstate movement

*Interstate direct.* The following table shows the number of entrances and the net tonnage of coastal vessels recorded into each State and the Northern Territory from any other State during 1970-71. The statistics below are not comparable with those for years prior to 1969-70 because the method of applying the classification 'interstate direct' has been changed to exclude overseas vessels. Before July 1969 overseas vessels were frequently classified as moving 'interstate direct' as distinct from 'overseas via States'. This difference in treatment arose from the practice of classifying movements in terms of port data on individual shipping returns, whereas the current method is to classify primarily on the basis of whether vessels are overseas or coastal.

#### INTERSTATE MOVEMENT: ENTRANCES OF COASTAL VESSELS INTERSTATE DIRECT STATES AND NORTHERN TERRITORY, 1970-71(a)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Number of vessels . . . . .	1,085	1,349	372	593	244	1,232	92	4,967
Net tonnage . . . '000 tons	6,981	5,752	2,014	3,910	1,815	2,920	259	23,651

(a) Excludes vessels of 200 net tons and under.

*Overseas via States.* The figures in the following table show the number and aggregate net tonnage of entrances and clearances of overseas vessels which, having arrived at an Australian port direct from an overseas port, continue their voyages to and from overseas countries via other Australian States. The statistics in the following table are not comparable with those prior to 1969-70 because of the change in method of classifying some overseas vessel movements referred to under *Interstate direct*, see above.

#### INTERSTATE MOVEMENT: ENTRANCES AND CLEARANCES OF VESSELS OVERSEAS VIA OTHER AUSTRALIAN STATES AND NORTHERN TERRITORY, 1970-71(a)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances . . . number	1,889	1,686	1,223	908	1,012	386	98	7,202
'000 net tons	10,377	11,800	5,632	4,920	6,595	1,917	249	41,490
Clearances . . . number	2,156	1,610	1,038	863	949	404	129	7,149
'000 net tons	12,281	9,991	4,639	5,534	6,424	1,881	412	41,163

(a) Excludes vessels of 200 net tons and under.

*Total Interstate movement.* The following table shows, for each State and the Northern Territory, the total number of entrances and clearances of vessels from and for other States during the year 1970-71 together with the aggregate net tonnage.

#### INTERSTATE MOVEMENT: TOTAL ENTRANCES AND CLEARANCES STATES AND NORTHERN TERRITORY, 1970-71(a)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances . . . number	2,974	3,035	1,595	1,501	1,256	1,618	190	12,169
'000 net tons	17,358	17,552	7,646	8,830	8,410	4,837	508	65,141
Clearances . . . number	3,244	2,947	1,413	1,448	1,203	1,635	223	12,113
'000 net tons	19,249	15,661	6,674	9,206	8,579	4,797	677	64,843

(a) Excludes vessels of 200 net tons and under.

The following table shows the total interstate movement of shipping, including overseas vessels travelling overseas via States, for Australia for each of the years 1966-67 to 1970-71.

**INTERSTATE MOVEMENT: TOTAL ENTRANCES AND CLEARANCES  
AUSTRALIA, 1966-67 TO 1970-71(a)**

		1966-67	1967-68	1968-69	1969-70	1970-71
Entrances	number	10,536	10,595	10,830	10,843	12,169
	'000 net tons	43,272	44,588	47,005	53,732	65,141
Clearances	number	10,542	10,566	10,824	10,781	12,113
	'000 net tons	43,398	44,529	47,070	53,523	64,843

(a) Excludes vessels of 200 net tons and under.

**Australian trading vessels**

The following table shows particulars of all Australian trading vessels of 200 gross tons or more engaged in the regular overseas, interstate or intrastate services at 31 December 1971.

**AUSTRALIAN TRADING VESSELS OF 200 GROSS TONS OR MORE  
31 DECEMBER 1971**

(Source: Department of Shipping and Transport)

<i>Vessels</i>	<i>Number</i>	<i>Dead-weight tons</i>	<i>Gross tons</i>
Interstate vessels—			
Australian-owned, Australian-registered . . . . .	74	922,785	674,164
Overseas-owned, Australian-registered, engaged in Australian coastal trade—			
New Zealand-owned . . . . .	7	21,548	19,305
Other . . . . .	10	278,844	177,779
Overseas-owned, overseas-registered, on charter, engaged in Australian coastal trade . . . . .	8	171,828	107,783
Total interstate vessels . . . . .	99	1,395,005	979,031
Intrastate vessels(a) . . . . .	23	124,889	83,466
Total coastal trading vessels . . . . .	122	1,519,894	1,062,497
Overseas trading vessels—			
Australian-owned, Australian-registered operated mainly on overseas services . . . . .	7	85,219	64,866
Australian-owned, overseas-registered operated wholly on overseas services . . . . .	4	25,203	20,623
Total overseas trading vessels . . . . .	11	110,422	85,489
Total Australian trading vessels . . . . .	133	1,630,316	1,147,986

(a) Includes two vessels registered overseas of 45,379 and 754 deadweight tons.

## Shipping at principal ports

For details of Harbour Boards and Trusts in each State see the chapter Public Authorities Finance.

The following table shows the total volume of shipping—overseas, interstate and coastal—which entered the principal ports of Australia during the years 1969-70 and 1970-71.

**TOTAL SHIPPING: ENTRANCES AT PRINCIPAL PORTS, AUSTRALIA**  
1969-70 AND 1970-71(a)

Port of entry	1969-70		1970-71		Port of entry	1969-70		1970-71	
	Num- ber	Net tons	Num- ber	Net tons		Num- ber	Net tons	Num- ber	Net tons
		'000		'000			'000		'000
New South Wales—					Western Australia—				
Sydney(b) . . .	4,289	21,422	3,883	19,552	Fremantle(d) . . .	1,414	10,112	1,388	9,403
Newcastle . . .	1,514	8,005	1,359	7,699	Albany . . .	161	905	168	967
Port Kembla . . .	1,001	5,787	874	5,184	Bunbury . . .	145	779	156	807
Victoria—					Carnarvon . . .	15	37	16	24
Melbourne . . .	2,854	13,714	2,818	13,710	Geraldton . . .	104	702	125	776
Geelong . . .	517	4,588	554	4,640	Yampi . . .	160	1,211	172	1,457
Queensland—					Port Hedland . . .	499	5,045	592	8,155
Brisbane . . .	1,621	7,684	1,508	7,938	Dampier . . .	373	5,032	475	6,918
Bowen . . .	33	139	19	69	Tasmania—				
Cairns . . .	187	473	160	524	Hobart . . .	643	1,763	600	1,636
Gladstone . . .	370	4,327	375	4,799	Burnie . . .	452	1,562	388	1,390
Mackay . . .	149	605	208	754	Devonport . . .	450	988	467	958
Rockhampton . . .	135	555	129	552	Launceston . . .	461	1,440	488	1,591
Townsville . . .	372	1,461	337	1,338	Port Latta . . .	41	833	39	799
Weipa . . .	226	2,333	286	3,191	Northern Territory—				
South Australia—					Darwin . . .	186	815	230	1,006
Adelaide(c) . . .	1,473	7,180	1,270	5,218	Groote Island . . .	92	298	68	319
Port Lincoln . . .	294	867	190	781					
Port Pirie . . .	238	1,008	213	1,331					
Rapid Bay . . .	41	142	41	156					
Wallaroo . . .	42	276	40	245					
Whyalla . . .	357	3,159	289	3,021					

(a) Excludes vessels of 200 net tons and under. (b) Includes Botany Bay. (c) Includes Port Stanvac. (d) Includes Kwinana.

## Shipping cargo

## Overseas and interstate cargo

The table on page 342 shows the aggregate tonnage of overseas and interstate cargo discharged and shipped at principal Australian ports.

**CARGO DISCHARGED AND SHIPPED: AUSTRALIA, 1966-67 TO 1970-71**  
(’000 tons)

Year	Overseas cargo				Interstate cargo			
	Discharged		Shipped		Discharged		Shipped	
	Weight	Meas.	Weight	Meas.	Weight	Meas.	Weight	Meas.
1966-67 . . .	27,109	4,152	32,691	1,943	15,565	1,900	15,692	1,728
1967-68 . . .	27,572	4,684	41,339	2,102	16,980	2,079	17,207	1,876
1968-69 . . .	29,298	5,212	54,956	2,054	18,158	2,161	18,511	1,932
1969-70 . . .	28,201	5,159	76,849	2,127	20,308	2,248	20,478	2,030
1970-71 . . .	21,410	5,069	100,210	2,612	23,789	2,403	24,540	2,194



**CARGO DISCHARGED AND SHIPPED AT PRINCIPAL PORTS, 1970-71**  
(<sup>'000 tons</sup>)

Port	Overseas cargo				Interstate cargo			
	Discharged		Shipped		Discharged		Shipped	
	Weight	Meas.	Weight	Meas.	Weight	Meas.	Weight	Meas.
<b>New South Wales—</b>								
Sydney . . . . .	2,710	1,864	5,422	885	1,982	180	295	245
Botany Bay . . . . .	2,231	..	71	..	2,609	..	148	..
Newcastle . . . . .	1,054	9	8,187	2	3,319	..	1,430	33
Port Kembla . . . . .	372	..	2,929	1	5,449	..	1,557	..
Other . . . . .	3	..	79	4	46	..	..	..
<i>Total New South Wales</i>	<i>6,370</i>	<i>1,873</i>	<i>16,688</i>	<i>892</i>	<i>13,405</i>	<i>180</i>	<i>3,430</i>	<i>278</i>
<b>Victoria—</b>								
Melbourne . . . . .	2,220	2,183	1,516	1,138	1,471	832	746	935
Geelong . . . . .	2,373	6	2,209	3	979	..	488	..
Portland . . . . .	131	1	502	1	12	..	5	..
Westernport . . . . .	419	..	606	..	49	11	5,408	1
Other . . . . .	..	..	..	..	..	..	..	..
<i>Total Victoria</i>	<i>5,143</i>	<i>2,190</i>	<i>4,833</i>	<i>1,142</i>	<i>2,511</i>	<i>843</i>	<i>6,647</i>	<i>936</i>
<b>Queensland—</b>								
Brisbane . . . . .	1,390	369	1,278	155	1,861	86	139	67
Cairns . . . . .	51	..	356	..	33	..	14	..
Gladstone . . . . .	20	..	7,920	..	59	..	295	..
Mackay . . . . .	28	..	567	..	27	..	81	..
Townsville . . . . .	64	6	782	..	96	1	101	..
Other . . . . .	376	1	6,008	10	13	2	553	2
<i>Total Queensland</i>	<i>1,929</i>	<i>376</i>	<i>16,911</i>	<i>165</i>	<i>2,089</i>	<i>89</i>	<i>1,183</i>	<i>69</i>
<b>South Australia—</b>								
Port Adelaide . . . . .	367	251	821	106	807	21	209	11
Ardrossan . . . . .	..	..	196	..	5	..	345	..
Port Lincoln . . . . .	17	..	552	5	18	..	435	..
Port Pirie . . . . .	26	..	761	..	149	..	278	..
Port Stanvac . . . . .	1,811	..	16	..	303	..	552	..
Rapid Bay . . . . .	..	..	..	..	..	..	81	..
Whyalla . . . . .	119	..	1,690	..	1,218	..	5,066	..
Other . . . . .	59	..	882	..	2	..	398	..
<i>Total South Australia</i>	<i>2,399</i>	<i>251</i>	<i>4,918</i>	<i>111</i>	<i>2,502</i>	<i>21</i>	<i>7,364</i>	<i>11</i>
<b>Western Australia—</b>								
Fremantle . . . . .	923	311	3,924	178	1,121	10	1,130	17
Albany . . . . .	147	..	616	..	1	..	..	..
Bunbury . . . . .	176	..	757	35	..	..	57	..
Dampier . . . . .	6	..	18,961	..	11	..	43	..
Geraldton . . . . .	..	..	1,404	..	5	..	..	..
Kwinana . . . . .	3,007	..	189	..	221	..	491	..
Port Hedland . . . . .	42	15	22,184	..	17	6	566	..
Yampi . . . . .	1	..	2,066	..	23	..	1,309	..
Other . . . . .	549	3	2,482	14	6	..	1,220	..
<i>Total Western Australia</i>	<i>4,851</i>	<i>329</i>	<i>52,583</i>	<i>227</i>	<i>1,405</i>	<i>16</i>	<i>4,816</i>	<i>17</i>
<b>Tasmania—</b>								
Hobart . . . . .	158	7	244	40	620	218	459	149
Burnie . . . . .	78	8	132	12	235	213	197	136
Launceston . . . . .	110	10	81	11	679	239	143	177
Port Latta . . . . .	..	..	2,020	..	12	..	..	..
Other . . . . .	62	1	60	11	129	415	177	408
<i>Total Tasmania</i>	<i>408</i>	<i>26</i>	<i>2,537</i>	<i>74</i>	<i>1,675</i>	<i>1,085</i>	<i>976</i>	<i>870</i>
<b>Northern Territory—</b>								
Darwin . . . . .	276	12	1,079	..	126	21	11	2
Groote Island . . . . .	4	..	618	..	25	3	111	..
Gove . . . . .	30	11	44	..	49	144	3	11
Other . . . . .	..	..	..	..	..	..	..	..
<i>Total Northern Territory</i>	<i>310</i>	<i>23</i>	<i>1,741</i>	<i>..</i>	<i>200</i>	<i>168</i>	<i>125</i>	<i>13</i>
<b>Australia . . . . .</b>	<b>21,410</b>	<b>5,069</b>	<b>100,210</b>	<b>2,612</b>	<b>23,789</b>	<b>2,403</b>	<b>24,540</b>	<b>2,194</b>

**Overseas cargo according to major trade areas and type of service**

The following two tables show for the years 1968-69 to 1970-71 particulars of cargo loaded in Australia for discharge overseas, and cargo discharged in Australia from overseas, classified according to the major trade areas of the world, by type of shipping service (i.e. liner or tramp, bulkship and tanker).

**CARGO LOADED IN AUSTRALIA FOR DISCHARGE OVERSEAS: MAJOR TRADE AREAS  
BY TYPE OF SERVICE: 1968-69 TO 1970-71**

('000 tons)

<i>Major trade areas</i>	<i>Liners (a)</i>		<i>Tramps, bulk ships, tankers</i>		<i>All vessels</i>	
	<i>Weight</i>	<i>Meas.</i>	<i>Weight</i>	<i>Meas.</i>	<i>Weight</i>	<i>Meas.</i>
<b>North America and Hawaii—</b>						
1968-69 . . . .	582	112	2,452	..	3,034	112
1969-70 . . . .	649	123	3,240	1	3,890	124
1970-71 . . . .	542	160	4,056	6	4,598	166
<b>South America—</b>						
1968-69 . . . .	25	5	300	2	325	7
1969-70 . . . .	50	6	427	..	477	6
1970-71 . . . .	52	11	541	..	593	11
<b>Europe—</b>						
1968-69 . . . .	1,148	515	6,672	133	7,820	648
1969-70 . . . .	1,363	509	9,100	11	10,462	520
1970-71 . . . .	1,123	538	14,861	..	15,984	538
<b>Africa—</b>						
1968-69 . . . .	150	85	237	..	387	85
1969-70 . . . .	238	99	370	15	608	114
1970-71 . . . .	201	102	1,953	1	2,154	103
<b>Asia—</b>						
<b>Eastern Asia—</b>						
1968-69 . . . .	1,134	151	38,290	4	39,424	155
1969-70 . . . .	1,490	193	54,960	..	56,450	193
1970-71 . . . .	1,148	392	70,004	10	71,152	402
<b>Other Asia—</b>						
1968-69 . . . .	872	343	1,622	130	2,494	473
1969-70 . . . .	919	378	2,291	62	3,210	439
1970-71 . . . .	755	374	3,065	120	3,820	494
<b>Total Asia—</b>						
1968-69 . . . .	2,006	494	39,912	134	41,918	628
1969-70 . . . .	2,409	570	57,251	62	59,660	632
1970-71 . . . .	1,903	766	73,069	130	74,972	896
<b>Papua New Guinea, New Zealand and Pacific Islands—</b>						
1968-69 . . . .	596	551	855	17	1,451	568
1969-70 . . . .	708	666	1,017	59	1,725	724
1970-71 . . . .	578	840	1,301	52	1,879	892
<b>Indian Ocean Is. and Antarctic Area—</b>						
1968-69 . . . .	..	..	20	5	20	5
1969-70 . . . .	..	..	26	6	26	7
1970-71 . . . .	..	..	29	5	29	5
<b>Australia—</b>						
1968-69 . . . .	4,508	1,763	50,448	291	54,956	2,054
1969-70 . . . .	5,417	1,973	71,432	154	76,849	2,127
1970-71 . . . .	4,399	2,417	95,810	194	100,210	2,612

(a) Cargo and passenger liners.

**CARGO DISCHARGED IN AUSTRALIA FROM OVERSEAS: MAJOR TRADE AREAS  
BY TYPE OF SERVICE: 1968-69 TO 1970-71**  
(<sup>'000 tons</sup>)

Major trade areas	Liners(a)		Tramps, bulk-ships, tankers		All vessels	
	Weight	Meas.	Weight	Meas.	Weight	Meas.
North America and Hawaii—						
1968-69 . . . . .	391	616	1,715	474	2,106	1,090
1969-70 . . . . .	406	619	1,361	376	1,768	994
1970-71 . . . . .	457	612	1,309	366	1,766	978
South America—						
1968-69 . . . . .	11	1	23	1	34	2
1969-70 . . . . .	13	3	19	..	32	3
1970-71 . . . . .	36	3	11	..	47	3
Europe—						
1968-69 . . . . .	676	1,620	263	233	940	1,853
1969-70 . . . . .	623	1,811	150	195	774	2,007
1970-71 . . . . .	623	1,623	148	156	771	1,779
Africa—						
1968-69 . . . . .	121	60	62	..	183	60
1969-70 . . . . .	120	56	106	..	226	56
1970-71 . . . . .	106	57	164	..	270	57
Asia—						
Eastern Asia—						
1968-69 . . . . .	316	1,023	976	343	1,292	1,366
1969-70 . . . . .	374	1,050	995	227	1,369	1,277
1970-71 . . . . .	471	1,057	1,523	280	1,994	1,337
Other Asia—						
1968-69 . . . . .	137	397	21,473	90	21,610	487
1969-70 . . . . .	155	431	20,956	57	21,110	488
1970-71 . . . . .	128	431	14,047	66	14,175	497
Total Asia—						
1968-69 . . . . .	453	1,420	22,449	433	22,902	1,853
1969-70 . . . . .	528	1,481	21,951	285	22,479	1,765
1970-71 . . . . .	599	1,488	15,570	346	16,169	1,834
Papua New Guinea, New Zealand and Pacific Islands—						
1968-69 . . . . .	277	346	2,007	6	2,283	352
1969-70 . . . . .	318	323	1,813	9	2,131	332
1970-71 . . . . .	300	389	1,457	29	1,757	418
Indian Ocean Is. and Antarctic Area—						
1968-69 . . . . .	..	..	851	2	851	2
1969-70 . . . . .	..	..	791	2	791	2
1970-71 . . . . .	..	..	629	..	629	..
Australia—						
1968-69 . . . . .	1,929	4,064	27,369	1,148	29,298	5,212
1969-70 . . . . .	2,008	4,293	26,193	866	28,201	5,159
1970-71 . . . . .	2,121	4,172	19,288	897	21,410	5,069

(a) Cargo and passenger liners.

**Overseas cargo according to country of registration of vessels**

The following table shows the total overseas cargo, discharged and shipped combined, according to the country in which the vessels were registered, during each of the years 1968-69 to 1970-71.



**OVERSEAS CARGO DISCHARGED AND SHIPPED, BY COUNTRY OF REGISTRATION OF  
VESSELS: AUSTRALIA, 1968-69 TO 1970-71**  
(<sup>'000 tons</sup>)

<i>Vessels registered at ports in</i>	<i>1968-69</i>		<i>1969-70</i>		<i>1970-71</i>	
	<i>Weight</i>	<i>Meas.</i>	<i>Weight</i>	<i>Meas.</i>	<i>Weight</i>	<i>Meas.</i>
Australia . . . . .	532	129	823	206	649	384
Denmark . . . . .	1,672	93	1,340	84	1,234	121
France . . . . .	864	114	1,514	109	1,134	69
Germany, Federal Republic of . . . . .	771	375	2,147	413	1,812	471
Greece . . . . .	3,496	182	5,799	180	9,395	108
Hong Kong . . . . .	438	114	716	106	935	61
India . . . . .	926	58	1,175	71	1,526	83
Italy . . . . .	550	49	643	61	989	57
Japan . . . . .	22,429	703	30,071	697	35,708	900
Liberia . . . . .	18,803	239	21,622	199	27,142	224
Netherlands . . . . .	2,086	409	2,488	375	2,176	310
New Zealand . . . . .	577	424	662	468	560	658
Norway . . . . .	11,317	595	11,069	442	11,469	450
Panama . . . . .	2,005	33	2,406	43	2,811	47
Sweden . . . . .	1,622	537	1,592	495	2,485	502
United Kingdom . . . . .	13,480	2,802	15,248	2,797	15,167	2,425
United States of America . . . . .	231	139	333	171	588	190
Other . . . . .	2,455	271	5,402	370	5,840	621
<b>Grand total . . . . .</b>	<b>84,254</b>	<b>7,266</b>	<b>105,050</b>	<b>7,285</b>	<b>121,620</b>	<b>7,681</b>

### World shipping tonnage

At 1 July 1971 the total number of steamships and motorships 100 gross tons and upwards throughout the world was 55,041 with a gross tonnage of 247,202,634. Of those totals, steamships numbered 7,350 for 87,518,130 gross tons, and motorships 47,691 for 159,684,504. This includes 6,292 oil tankers of 100 gross tons and upwards with a gross tonnage of 96,141,475. Australian steamships and motorships, 350 for 1,105,236 gross tons constituted 0.64 per cent and 0.45 per cent respectively of the total number and gross tonnage. This information has been derived from *Lloyd's Register of Shipping*.

### Vessels registered in Australia

The following table shows the number and gross tonnage of trading vessels of 200 tons and over registered in Australia at 31 December 1971, classified according to: (i) year of construction, (ii) type of trade in which the vessels were engaged and (iii) vessels built in Australian or in overseas shipyards.

#### AUSTRALIAN-REGISTERED TRADING VESSELS, 31 DECEMBER 1971(a)

(Source: Department of Shipping and Transport)

<i>Year of construction</i>	<i>Overseas and interstate vessels</i>				<i>Intrastate vessels</i>		<i>Built in Australian yards</i>		<i>Built overseas</i>		<i>Total</i>	
	<i>No.</i>	<i>Gross tons</i>	<i>No.</i>	<i>Gross tons</i>	<i>No.</i>	<i>Gross tons</i>	<i>No.</i>	<i>Gross tons</i>	<i>No.</i>	<i>Gross tons</i>	<i>No.</i>	<i>Gross tons</i>
1967 and earlier . . . . .	79	638,469	16	19,116	55	427,105	40	230,480	95	657,585		
1968 . . . . .	4	99,326	2	669	5	63,907	1	36,088	6	99,995		
1969 . . . . .	7	80,755	2	32,709	7	78,990	2	34,474	9	113,464		
1970 . . . . .	5	62,144	..	..	4	52,814	1	9,330	5	62,144		
1971 . . . . .	3	55,420	1	357	2	39,416	2	16,361	4	55,777		
<b>Total registered in Australia . . . . .</b>	<b>98</b>	<b>936,114</b>	<b>21</b>	<b>52,851</b>	<b>73</b>	<b>662,232</b>	<b>46</b>	<b>326,733</b>	<b>119</b>	<b>988,965</b>		

(a) 200 gross tons and over.

### Miscellaneous

#### Shipping freight rates

Lists of shipping freight rates for selected commodities are shown annually in the bulletin *Transport and Communication* and quarterly, in less detail, in the *Quarterly Summary of Australian Statistics*.

#### Shipping casualties

Courts of Marine Inquiry are constituted by a magistrate assisted by skilled assessors, and, when necessary, are held at the principal port in each State and at Launceston (Tasmania). Such courts have power to deal with the certificates of officers who are found at fault. Particulars of shipping losses and casualties reported on or near the coast during each of the years 1966-67 to 1970-71 are shown in the table below.

#### SHIPPING CASUALTIES TO OVERSEAS AND INTERSTATE STEAM AND MOTOR VESSELS(a) AUSTRALIA, 1966-67 TO 1970-71

Year	Shipping losses			Other shipping casualties			Total shipping casualties		
	Vessels	Net tons	Lives lost	Vessels	Net tons	Lives lost	Vessels	Net tons	Lives lost
1966-67	..	..	..	104	545,927	..	104	545,927	..
1967-68	..	..	..	100	416,332	..	100	416,332	..
1968-69	..	..	..	105	434,028	..	105	434,028	..
1969-70	1	734	21	83	318,024	..	84	318,758	21
1970-71	..	..	..	79	451,196	2	79	451,196	2

(a) Vessels over 50 net tons.

#### Lighthouses; distances by sea; depth of water and tides at main ports

A list of the principal lighthouses on the coast of Australia, giving details of the location, number, colour, character, period, candle-power and visibility of each light will be found in *Transport and Communication*, Bulletin No. 61.

The distances by sea between principal ports of Australia and some important ports in other countries which trade with Australia and the depths of water and tides at principal ports of Australia will be found in *Transport and Communication*, Bulletin No. 61.

### RAILWAYS

#### Government railways

Government railways in Australia operate in all States and Territories and provide an important means of transportation. In 1970-71 a total of 85.9 million tons of freight were carried, an increase of 109.9 per cent over the 40.9 million tons carried in 1950-51. However, in the same twenty-year period the number of passengers carried (mostly within the suburban areas of Sydney and Melbourne) declined by 4.9 per cent from 476 millions in 1950-51 to 453 millions in 1970-71. The number of train miles run during 1970-71 (97.1 million) was only 9.5 per cent greater than in 1950-51, which is an indication of the trend towards heavier train loads with the more powerful motive power now available. Since the introduction of the first mainline diesel-electric locomotives in 1950 their numbers have increased greatly until at 30 June 1971 there were 1,323 throughout Australia. Diesel-electric locomotives during 1970-71 hauled 62 million train-miles, while steam locomotives hauled only 1 million train-miles.

#### Railway development

The first steam-operated railway in Australia ran between Melbourne and Port Melbourne, a distance of two miles, and was opened on 12 September 1854. It was owned and operated by the Melbourne and Hobson's Bay Railway. Within a short time privately-owned railways opened in other States, but owing to the small volume of traffic available they were soon in financial difficulties and all were taken over by the respective State Governments. Under the policy of Government ownership and control the railway networks expanded until at 30 June 1941 there were 27,234 route-miles open for traffic in Australia. This was the greatest mileage ever recorded. Since the 1939-45

War many uneconomic branch lines have been closed. From 1 July 1948 to 30 June 1971 3,373 miles have been closed, the greatest lengths being in Western Australia (997 miles), Queensland (869 miles), and Victoria (621 miles). During this same period 1,175 miles of new railway were added to the networks. The following table sets out the route-miles of government railways in each State and Territory at various dates since 1855.

**GOVERNMENT RAILWAYS: ROUTE-MILEAGE OPEN, STATES AND TERRITORIES  
1855 TO 1971**

(Miles)

30 June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1855(a)	14	2	..	7	..	..	..	..	23
1861(a)	73	114	..	56	..	..	..	..	243
1871(a)	358	276	218	133	..	45	..	..	1,030
1881(a)	996	1,247	800	832	92	45	..	..	4,012
1891	2,182	2,763	2,195	1,666	198	351	145	..	9,500
1901	2,846	3,237	2,801	1,736	1,355	457	145	..	12,577
1911	3,762	3,523	3,868	1,935	2,376	470	145	..	16,079
1921	5,043	4,267	5,752	3,408	3,992	630	199	5	23,296
1931	6,247	4,514	6,529	3,725	4,634	665	317	5	26,636
1941	6,368	4,518	6,567	3,809	4,835	642	490	5	27,234
1951	6,354	4,445	6,560	3,805	4,682	613	490	5	26,954
1961	6,303	4,050	6,324	3,836	4,577	517	490	5	26,102
1967	6,259	4,027	5,730	3,779	4,269	500	490	5	25,059
1968	6,265	4,012	5,825	3,780	4,269	500	490	5	25,146
1969	6,265	3,972	5,824	3,759	4,280	500	490	5	25,095
1970	6,294	3,962	5,813	3,714	4,282	500	490	5	25,060
1971	6,294	3,962	5,797	3,683	4,291	500	490	5	25,022

(a) At 31 December.

One feature of the Australian government railways is the variety of gauges to which they are built. There are three principal gauges, 'broad' (5ft 3in), 'standard' (4ft 8½in), and 'narrow' (3ft 6in). Extensive route-mileages of 3ft 6in gauge railway were built in areas where traffic volumes were initially known to be small and where it was imperative to minimise the costs of construction. The following table shows the mileages open in each State and Territory at 30 June 1971 according to gauge.

**GOVERNMENT RAILWAYS: ROUTE-MILEAGE OPEN, BY GAUGE  
STATES AND TERRITORIES, 30 JUNE 1971**

(Miles)

Gauge	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
5ft 3in	(a)204	(b)3,751	..	1,570	..	..	..	..	5,525
4ft 8½in	(c)6,090	202	69	(d)1,088	(e)905	..	..	(f)5	8,359
3ft 6in	..	..	5,698	(g)1,025	(h)3,386	500	(i)490	..	11,099
2ft 6in	..	9	..	..	..	..	..	..	9
2ft 0in	..	..	30	..	..	..	..	..	30
<b>Total</b>	<b>6,294</b>	<b>3,962</b>	<b>5,797</b>	<b>3,683</b>	<b>4,291</b>	<b>500</b>	<b>490</b>	<b>5</b>	<b>25,022</b>
Per 1,000 of population	1.38	1.14	3.20	3.16	4.26	1.28	5.96	0.04	1.98
Per 1,000 square miles	20.34	45.08	8.69	9.69	4.40	18.95	0.94	5.32	8.43

(a) Portion of Victorian Railway system. (b) Excludes 202 route-miles of 5ft 3in gauge which almost parallels the 4ft 8½in gauge line between Melbourne and the Murray River. (c) Includes 29 route-miles of 4ft 8½in gauge line from Broken Hill to Cockburn owned and operated by the South Australian Government Railways. (d) Comprises 654 miles of the Trans-Australian and 217 miles of the Central Australia Railway systems and 217 miles from Port Pirie to Cockburn. (e) Includes 454 miles of the Trans-Australian Railway system. (f) Australian Capital Territory Railway system. (g) Includes 428 miles of the Central Australia Railway system. (h) Excludes 248 miles of 3ft 6in gauge line which parallels the 4ft 8½in gauge line and 74 miles of 3ft 6in/4ft 8½in dual gauge line which are included in the 4ft 8½in gauge line. (i) Comprises 173 miles of the Central Australia and 317 miles of the North Australia Railway systems.



**Government railway systems**

There are six separate State Government railway systems and one Commonwealth railway system. As the Commonwealth system includes mileages in South Australia and Western Australia, and the Victorian system extends into New South Wales, the system route-mileages shown in the following table do not represent mileages within each State and Territory. These are shown in the previous table. The route-mileage of each system open for traffic, according to gauge, at 30 June 1971 is shown in the following table.

**GOVERNMENT RAILWAYS: ROUTE-MILEAGE OPEN, BY GAUGE AND SYSTEM**  
**30 JUNE 1971**  
(Miles)

System	Gauge					Total
	5ft 3in	4ft 8½in	3ft 6in	2ft 6in	2ft 0in	
New South Wales	..	(a)6,061	..	..	..	6,061
Victoria	(b)3,955	202	..	9	..	4,166
Queensland	..	69	5,698	..	30	5,797
South Australia	1,570	246	597	..	..	2,413
Western Australia	..	451	(c)3,386	..	..	3,837
Tasmania	..	..	500	..	..	500
Commonwealth	..	1,330	918	..	..	2,248
<b>Australia</b>	<b>5,525</b>	<b>8,359</b>	<b>11,099</b>	<b>9</b>	<b>30</b>	<b>25,022</b>

(a) Includes 270 route-miles which are electrified. (b) Excludes 202 route-miles of 5ft 3in gauge line which almost parallels the 4ft 8½in gauge line between Melbourne and the Murray River. Includes 262 route-miles which are electrified. (c) Excludes 248 miles of 3ft 6in gauge line which parallels the 4ft 8½in gauge line and 74 miles of 3ft 6in/4ft 8½in dual gauge line which are included in the 4ft 8½in gauge line.

The New South Wales system is based on Sydney and extends throughout the State. The Victorian system based on Melbourne radiates throughout the State, extending into areas of southern New South Wales. The Queensland system extends along the coast from Brisbane to Cairns in the north, while branch lines extend inland from Brisbane and the larger coastal cities of Rockhampton and Townsville. The main South Australian system is in the South-east of the State, but an isolated narrow-gauge system operates in the Eyre Peninsula area. The railway system in Western Australia is established in the south-western section of the State, but extends north to Meekatharra and east to Kalgoorlie and Esperance. In Tasmania the main line connects Hobart and Launceston, and there are branch lines along the northern coast.

The Commonwealth Railways comprises four separate railways. The Trans-Australian Railway, extending from Port Pirie to Kalgoorlie, is of 4ft 8½in gauge, as is that part of the Central Australia Railway from Port Augusta (Sterling North) to Marree. A further extension of this railway from Marree to Alice Springs is of 3ft 6in gauge, as is the North Australia Railway from Darwin to Birdum. The Australian Capital Territory Railway from Queanbeyan to Canberra is of 4ft 8½in gauge. In this chapter particulars of the four Commonwealth railways are combined; however, particulars for each railway are shown separately in the annual bulletin *Transport and Communication*.

A graph showing the route-mileages and traffic of all Government railways from 1870 to 1970-71 appears on plate 28 on page 349.

**Standardisation of railway gauges**

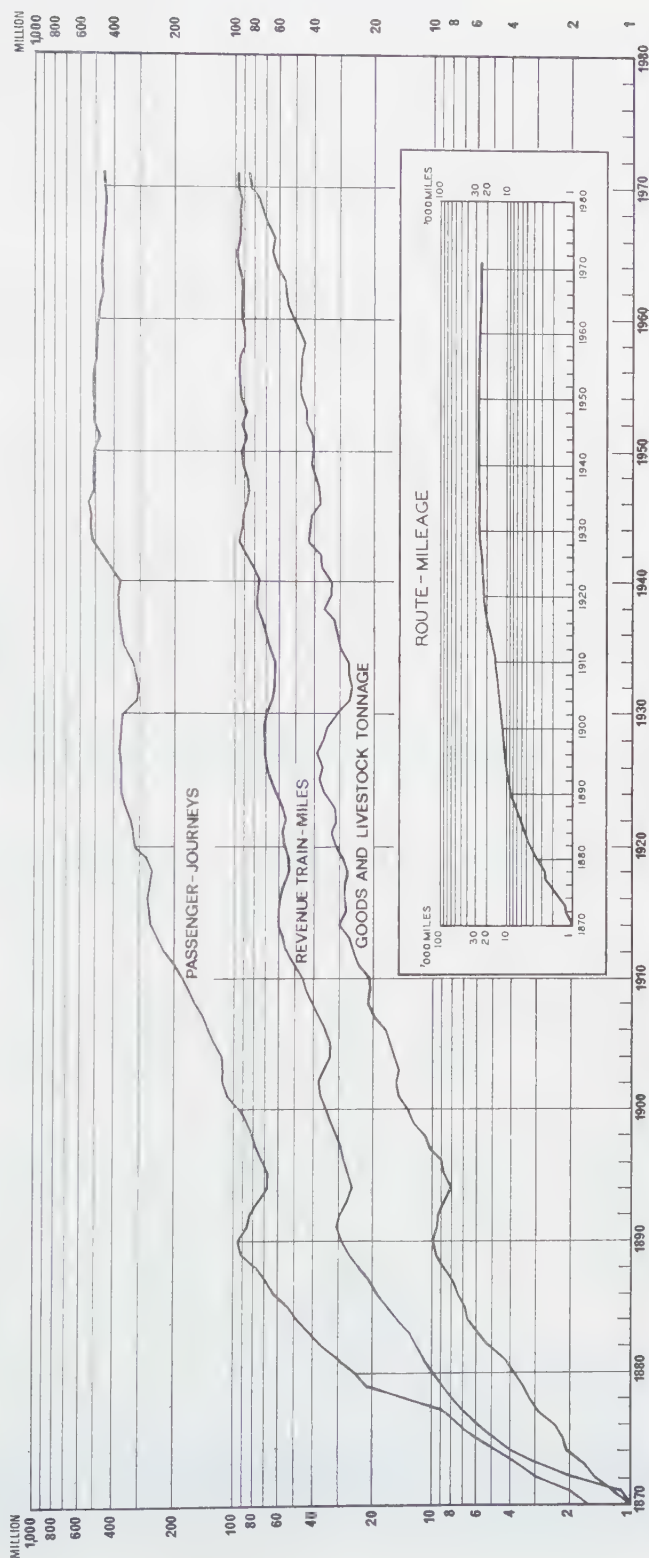
The completion of the standard gauge line from Broken Hill to Cockburn in November 1969 saw the final step in the standard gauge link between Fremantle (Western Australia) and Sydney (New South Wales). The first through freight service to operate between Sydney and Fremantle commenced on 12 January 1970 and the new passenger service over the same route was inaugurated on 23 February 1970. This passenger service has been named the *Indian-Pacific* after the oceans it links.

At this stage all mainland capital cities, except Adelaide, are linked by the standard gauge system. This system now extends from South Brisbane to Sydney via Kyogle (New South Wales); from Sydney to Melbourne via Albury (New South Wales); from Sydney to Cockburn (on the South Australia/New South Wales border) via Parkes and Broken Hill; from Cockburn to Port Pirie (South Australia); from Port Pirie to Kalgoorlie (Western Australia) via Port Augusta (South Australia); and from Kalgoorlie to Fremantle via Koolyanobbing, Merredin and Northam (Western Australia). Although the task of linking Australia by standard gauge was commenced in 1912 with the beginning of construction of the standard gauge line between Port Augusta and Kalgoorlie it took almost sixty years to complete. Major factors contributing to the delay in construction were a lack of funds and the failure of successive State and Commonwealth Governments to agree on matters concerning the introduction of the standard gauge.

# GOVERNMENT RAILWAYS: AUSTRALIA, 1870 TO 1970-71

## ROUTE MILEAGE AND TRAFFIC

LOGARITHMIC GRAPH



NOTE: VERTICAL SCALE IS LOGARITHMIC AND THE CURVES RISE AND FALL ACCORDING TO RATE OF INCREASE OR DECREASE. ACTUAL NUMBERS ARE INDICATED BY SCALE.

The major benefits of standardisation are the saving in time and costs due to the elimination of the multiple handling of goods and the trans-shipment of passengers at points of break-in-gauge. The through freight services between Sydney and Perth takes 3½ days compared with the 8 to 10 days which applied previously. Similarly passenger services have been improved and travelling time cut from about 80 hours to 65 hours.

The historical background to the standardisation of railway gauges is given in Year Book No. 53 pages 440-5, and a special article outlining the stages in the development and completion of the *Indian-Pacific* route (Perth-Sydney) is given in Year Book No. 56, pages 353-8.

#### Future developments in standardisation

The Commonwealth Government has announced its intention to finance a standard gauge connection between Adelaide and the new standard gauge railway. Details of the connection have yet to be decided. When this link is forged all mainland state capital cities will then be connected to the interstate standard gauge network. However, the direct link between Adelaide and Melbourne will still be broad gauge (5ft 3in).

Work is proceeding on a new standard gauge railway between Port Augusta and Whyalla (South Australia). This will be 47 miles long and will be owned and operated by Commonwealth Railways. It will connect Whyalla with the interstate standard gauge network. In addition to general goods and passenger traffic, it will be used for the carriage of considerable quantities of steel products which are at present transported by road between Whyalla and Port Augusta (for rail transport to Melbourne and Sydney).

The Commonwealth Government also has approved a proposal for a new standard gauge railway, about 522 miles long, between Tarcoola on the Trans-Australian Railway, and Alice Springs to replace the existing narrow gauge railway between Marree and Alice Springs. Survey work has commenced.

The Western Australian Government has decided to convert to standard gauge the existing narrow gauge railway between Kalgoorlie and Esperance, a distance of about 258 miles.

### Operations of Government railway systems

Particulars of train-mileages, passenger-journeys, passenger-miles, freight tons carried, and freight ton-miles included in this section refer only to operations for which revenue is received.

#### Summary of operations

##### GOVERNMENT RAILWAYS: SUMMARY OF OPERATIONS, SYSTEMS, 1970-71

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Cwlth</i>	<i>Aust.</i>
Train-mileage ( <sup>'000</sup> )(a)—								
Suburban passenger	10,416	8,315	1,993	2,098	1,388	108	..	24,319
Country passenger	10,601	4,768	3,053	1,248	990	230	961	21,852
Goods(b)	18,523	7,747	12,323	2,998	5,566	758	3,049	50,963
Total	39,540	20,831	17,368	6,344	7,944	1,096	4,010	97,133
Passenger-journeys ( <sup>'000</sup> )(c)—								
Suburban	238,800	138,131	27,621	13,393	10,557	636	..	429,139
Country(d)	15,987	4,080	1,915	553	362	235	259	23,392
Total	254,787	142,211	29,536	13,946	10,919	871	259	452,530
Passenger-miles ( <sup>'000</sup> )(e)—								
Suburban	n.a.	1,285,253	n.a.	106,052	n.a.	4,523	..	n.a.
Country	n.a.	379,845	n.a.	91,680	77,170	12,270	141,410	n.a.
Total	n.a.	1,665,098	n.a.	197,732	n.a.	16,793	141,410	n.a.
Freight—								
Tons carried ( <sup>'000</sup> )(d)	33,204	12,490	15,418	5,990	13,244	1,201	4,382	85,929
Net ton-miles (million)(f)	5,538.1	2,118.7	3,316.4	986.9	2,078.0	94.2	1,282.1	15,414.5

(a) One train (i.e. a complete unit of locomotive and vehicles, electric train set, or rail motor) travelling one mile for revenue purposes. (b) Includes mixed train-mileage. (c) Based on ticket sales making allowances for periodical tickets. Tickets sold at concession rates are counted as full journeys. (d) Inter-system traffic is included in the total for each system (including each Commonwealth railway) over which it passes. (e) One passenger travelling one mile. (f) One ton carried one mile.



## Rolling stock

GOVERNMENT RAILWAYS: ROLLING STOCK INCLUDED IN CAPITAL ACCOUNT  
(Number)

System and date	Locomotives					Coaching stock(b)	Goods stock	Service stock
	Steam	Diesel-electric	Electric	Other(a)	Total			
30 June 1971—								
New South Wales . . .	89	395	41	55	580	(c)3,279	18,710	2,143
Victoria . . .	38	246	35	81	400	(c)2,398	19,731	1,617
Queensland . . .	..	345	..	81	426	1,227	19,989	2,155
South Australia . . .	5	146	..	..	151	(c)422	7,292	617
Western Australia . . .	48	178	..	18	244	(c)458	12,080	911
Tasmania . . .	19	38	..	21	78	126	2,140	171
Commonwealth . . .	1	99	..	..	100	(c)74	2,312	506
<b>Australia . . .</b>	<b>200</b>	<b>1,447</b>	<b>76</b>	<b>256</b>	<b>1,979</b>	<b>(d)8,183</b>	<b>(d)82,279</b>	<b>(d)8,141</b>
30 June—								
1970 . . .	368	1,388	76	230	2,062	8,281	83,840	8,205
1969 . . .	753	1,283	76	209	2,321	8,127	84,584	7,972
1968 . . .	1,077	1,186	76	168	2,507	8,619	85,552	7,904
1967 . . .	1,337	1,054	76	156	2,623	8,727	86,887	7,920
1966 . . .	1,591	925	76	150	2,742	8,748	88,205	7,987

(a) Includes non-passenger-carrying diesel power vans. (b) Includes all brake vans and non-powered electric train stock. (c) Excludes stock jointly-owned with other systems. (d) Includes jointly-owned stock.

## Train-mileage

## Train-mileage by type of service and motive power

GOVERNMENT RAILWAYS: TRAIN MILEAGE 1970-71  
(<sup>0</sup>000 miles)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Cwlth	Aust.
Type of service—								
Passenger—suburban	10,416	8,315	1,993	2,098	1,388	108	..	24,319
Passenger—country .	10,601	4,768	3,053	1,248	990	230	961	21,852
Goods(a) . . .	18,523	7,747	12,323	2,998	5,566	758	3,049	50,963
<b>Total . . .</b>	<b>39,540</b>	<b>20,831</b>	<b>17,368</b>	<b>6,344</b>	<b>7,944</b>	<b>1,096</b>	<b>4,010</b>	<b>97,133</b>
Type of motive power—								
Hauled by diesel-electric locomotives	22,208	9,952	15,303	3,637	6,254	933	3,920	62,207
Hauled by steam locomotives . . .	502	12	2	2	287	7	..	813
Hauled by electric and other locomotives .	2,269	994	418	..	..	16	..	3,697
Powered coaching stock . . .	14,561	9,873	1,645	2,704	1,403	139	90	30,416
<b>Total . . .</b>	<b>39,540</b>	<b>20,831</b>	<b>17,368</b>	<b>6,344</b>	<b>7,944</b>	<b>1,096</b>	<b>4,010</b>	<b>97,133</b>

(a) Includes mixed train-miles.

## Total Train-mileage

TRAIN MILEAGE, 1966-67 TO 1970-71  
(<sup>0</sup>000 miles)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Cwlth	Aust.
1966-67 . . .	37,638	20,035	16,876	6,584	8,316	1,275	2,958	93,682
1967-68 . . .	38,535	19,885	16,831	6,418	8,372	1,247	3,206	94,494
1968-69 . . .	38,201	19,689	17,109	6,176	7,901	1,197	3,559	93,832
1969-70 . . .	39,128	20,543	18,263	6,192	7,848	1,180	3,963	97,119
1970-71 . . .	39,540	20,831	17,368	6,344	7,944	1,096	4,010	97,133

## Passenger traffic

## Passenger-journeys

## GOVERNMENT RAILWAYS: PASSENGER-JOURNEYS(a), SYSTEMS, 1966-67 TO 1970-71 ('000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Cwlth	Aust.
SUBURBAN								
1966-67	239,986	141,593	23,703	14,608	9,468	973	..	430,331
1967-68	238,061	141,733	24,065	14,447	9,628	870	..	428,804
1968-69	233,211	140,788	25,771	13,760	9,832	838	..	424,200
1969-70	236,347	140,309	26,317	13,441	10,227	712	..	427,354
1970-71	238,800	138,131	27,621	13,393	10,557	636	..	429,139
COUNTRY(b)								
1966-67	15,298	4,674	2,668	824	343	224	371	24,402
1967-68	15,253	4,535	2,526	795	342	217	347	24,015
1968-69	15,257	4,078	2,395	664	338	207	298	23,237
1969-70	15,231	4,000	2,197	549	352	194	244	22,768
1970-71	15,987	4,080	1,915	553	362	235	259	23,391
TOTAL(b)								
1966-67	255,284	146,268	26,372	15,432	9,811	1,197	371	454,735
1967-68	253,313	146,268	26,591	15,242	9,970	1,087	347	452,818
1968-69	248,469	144,866	28,165	14,423	10,170	1,045	298	447,437
1969-70	251,578	144,309	28,515	13,990	10,580	907	244	450,122
1970-71	254,787	142,211	29,536	13,946	10,919	871	259	452,530

(a) Based on ticket sales making allowance for periodical tickets. Tickets sold at concession rates are counted as full journeys. (b) Inter-system traffic is included in the total for each system (including each Commonwealth railway) over which it passes.

## Passenger-miles

## GOVERNMENT RAILWAYS: PASSENGER-MILES(a), SYSTEMS, 1966-67 TO 1970-71 ('000)

Year	Vic.	S.A.	W.A.	Tas.	Cwlth
SUBURBAN					
1966-67	1,256,759	121,549	n.a.	6,306	..
1967-68	1,250,058	117,764	n.a.	5,665	..
1968-69	1,263,823	112,039	n.a.	5,567	..
1969-70	1,252,955	108,790	n.a.	4,941	..
1970-71	1,285,253	106,052	n.a.	4,523	..
COUNTRY					
1966-67	393,121	96,331	67,897	14,843	129,764
1967-68	375,783	89,629	68,065	11,427	119,772
1968-69	368,139	84,633	67,627	11,322	125,612
1969-70	355,755	86,547	74,581	10,695	135,830
1970-71	379,845	91,680	77,170	12,270	141,410
TOTAL					
1966-67	1,649,880	217,880	n.a.	21,149	129,764
1967-68	1,625,840	207,393	n.a.	17,092	119,772
1968-69	1,631,962	196,672	n.a.	16,889	125,612
1969-70	1,608,710	195,337	n.a.	15,636	135,830
1970-71	1,665,098	197,732	n.a.	16,793	141,410

(a) Particulars for New South Wales, Queensland and the suburban system in Western Australia are not available and as a consequence, no totals for Australia are available.

**Freight traffic***Freight carried***GOVERNMENT RAILWAYS: FREIGHT CARRIED(a), SYSTEMS**

('000 tons)

<i>Commodity and year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Cwlth</i>	<i>Aust.</i>
1970-71—								
Wheat . . . . .	3,461	2,541	313	1,059	2,424	..	(b)	9,798
Other agricultural produce . . . . .	1,228	1,044	2,653	345	714	23	37	6,044
Coal, coke and briquettes . . . . .	14,657	1,243	7,930	15	186	90	1,604	25,725
Other minerals(c) . . . . .	3,301	121	1,198	1,609	7,471	30	1,126	14,856
Wool . . . . .	207	172	28	22	129	4	4	566
Fertilisers and manure . . . . .	281	822	110	263	414	91	4	1,985
Cement . . . . .	1,073	844	191	125	(d)	250	126	2,609
Timber . . . . .	296	477	144	64	292	353	32	1,658
Livestock . . . . .	196	242	537	159	70	14	146	1,364
All other commodities . . . . .	8,504	4,984	2,314	2,329	(e)1,544	346	1,303	21,324
<b>Total . . . . .</b>	<b>33,204</b>	<b>12,490</b>	<b>15,418</b>	<b>5,990</b>	<b>13,244</b>	<b>1,201</b>	<b>4,382</b>	<b>85,929</b>
1969-70 . . . . .	33,442	11,835	14,439	5,888	10,665	1,258	4,824	82,351
1968-69 . . . . .	31,871	11,316	12,975	5,003	8,934	1,242	4,401	75,742
1967-68 . . . . .	30,745	11,116	11,133	4,368	8,910	1,162	3,627	71,061
1966-67 . . . . .	29,275	12,075	10,185	4,876	7,873	1,079	3,121	68,484
1965-66 . . . . .	27,004	12,156	10,049	4,789	6,384	1,072	2,976	64,430

(a) Inter-system traffic is included in the total for each system (including each Commonwealth railway) over which it passes. (b) Less than 500 tons. (c) Includes sand and gravel. (d) Cement included with 'All other commodities'. (e) Includes cement.

*Freight net ton-miles***GOVERNMENT RAILWAYS: FREIGHT NET TON-MILES, SYSTEMS**

(Million)

<i>Commodity and year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Cwlth</i>	<i>Aust.</i>
1970-71—								
Wheat . . . . .	1,041.7	440.8	(a)	91.2	355.2	..	(b)	n.a.
Other agricultural produce . . . . .	488.8	207.2	(a)	39.0	123.7	2.1	27.5	n.a.
Coal, coke and briquettes . . . . .	603.7	126.3	(a)	4.3	9.8	11.2	249.7	n.a.
Other minerals(c) . . . . .	416.8	8.5	(a)	238.9	932.0	1.1	150.4	n.a.
Wool . . . . .	51.2	23.9	(a)	4.5	33.5	0.5	3.3	n.a.
Fertilisers and manure . . . . .	89.9	134.3	(a)	51.0	79.8	16.3	2.5	n.a.
Cement . . . . .	156.2	58.8	(a)	14.7	(d)	10.7	9.9	n.a.
Timber . . . . .	120.5	74.7	(a)	13.2	61.9	18.9	27.2	n.a.
Livestock . . . . .	72.2	42.4	145.1	24.5	11.0	2.1	51.1	348.4
All other commodities . . . . .	2,497.1	1,001.8	3,171.3	505.6	(e)471.1	31.2	760.5	8,438.6
<b>Total . . . . .</b>	<b>5,538.1</b>	<b>2,118.7</b>	<b>3,316.4</b>	<b>986.9</b>	<b>2,078.0</b>	<b>94.2</b>	<b>1,282.1</b>	<b>15,414.5</b>
1969-70 . . . . .	5,384.3	2,037.2	3,110.2	947.6	1,749.1	119.5	1,312.5	14,660.5
1968-69 . . . . .	4,942.4	1,903.0	2,617.5	803.7	1,525.8	117.2	1,216.3	13,125.9
1967-68 . . . . .	4,844.1	1,776.2	2,201.3	680.9	1,571.7	117.2	1,072.3	12,263.7
1966-67 . . . . .	4,554.8	1,937.4	2,003.6	739.4	1,244.1	118.2	919.2	11,516.7
1965-66 . . . . .	4,281.8	1,989.5	2,002.0	749.3	1,020.8	113.4	881.4	11,038.2

(a) Not available separately, included with 'All other commodities'. (b) Less than 100,000 ton-miles. (c) Includes sand and gravel. (d) Cement included with 'All other commodities'. (e) Includes cement.



## Finance

**GOVERNMENT RAILWAYS: GROSS EARNINGS(a), SYSTEMS, 1970-71**  
(\$'000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Cwlth	Aust.
Coaching—								
Suburban passenger .	33,548	23,986	2,913	2,048	1,543	62	..	64,099
Country passenger .	17,893	7,816	3,870	1,808	2,050	146	3,112	36,694
Other . . . . .	9,065	4,206	2,875	884	1,550	220	642	19,442
<i>Total, coaching . (b)</i>	<i>60,506</i>	<i>36,008</i>	<i>9,658</i>	<i>4,740</i>	<i>5,143</i>	<i>427</i>	<i>3,754</i>	<i>120,236</i>
Freight (goods and live-stock)—								
Wheat . . . . .	(c)	14,640	2,580	4,134	10,232	..	..	n.a.
Other agricultural produce . . . . .	(c)	5,981	14,453	1,360	3,938	135	398	n.a.
Coal, coke and briquettes . . . . .	(c)	4,222	24,184	73	555	346	1,843	n.a.
Other minerals(d) . . . . .	(c)	277	11,195	7,148	14,141	82	2,348	n.a.
Wool . . . . .	(c)	1,473	902	138	1,914	40	59	n.a.
Fertilisers and manure . . . . .	(c)	2,935	1,321	858	2,099	711	24	n.a.
Cement . . . . .	(c)	2,741	1,976	390	(e)	727	226	n.a.
Timber . . . . .	(c)	2,802	1,848	276	2,141	986	288	n.a.
Livestock . . . . .	2,590	1,221	6,755	1,016	440	90	683	12,795
All other commodities	173,124	28,305	32,344	11,544 (f)	16,875	2,023	17,384	281,599
<i>Total, freight . (b)</i>	<i>175,714</i>	<i>64,597</i>	<i>97,558</i>	<i>26,938</i>	<i>52,335</i>	<i>5,142</i>	<i>23,255</i>	<i>445,539</i>
Miscellaneous . . . . .	(b)15,679	8,041	2,949	2,723	3,193	235	1,970	34,789
<b>Grand total . . . . .</b>	<b>(b)251,899</b>	<b>108,646</b>	<b>110,165</b>	<b>34,399</b>	<b>60,671</b>	<b>5,805</b>	<b>28,979</b>	<b>600,564</b>

(a) Excludes Government grants. (b) Includes State Co-ordination Tax Contribution. (c) Not available separately, included with 'All other commodities'. (d) Includes sand and gravel. (e) Cement included with 'All other commodities'. (f) Includes cement.

**GOVERNMENT RAILWAYS: WORKING EXPENSES, SYSTEMS, 1970-71**  
(\$'000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.(a)	Cwlth	Aust.
Maintenance of way and works . . . . .	38,827	26,153	30,580	(a)10,144	(a)14,440	2,423	7,757	130,324
Motive power(b) . . . . .	79,057	33,469	38,270	(a)14,437	(a)22,791	3,202	8,168	199,394
Traffic . . . . .	63,291	39,216	29,490	(a)12,342	15,014	2,847	5,714	167,915
Other charges . . . . .	61,667	30,215	6,814	5,792	7,408	1,418	7,741	121,056
<b>Total . . . . .</b>	<b>242,842</b>	<b>129,054</b>	<b>105,155</b>	<b>(a)42,714</b>	<b>(a)59,652</b>	<b>9,891</b>	<b>(a)29,382</b>	<b>618,690</b>

(a) Includes provision of reserves for depreciation. (b) Includes maintenance of rolling stock.

**GOVERNMENT RAILWAYS: GROSS EARNINGS, WORKING EXPENSES, AND NET EARNINGS  
SYSTEMS, 1966-67 TO 1970-71**  
(\$'000)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Cwlth</i>	<i>Aust.</i>
<b>GROSS EARNINGS</b>								
1966-67	213,335	104,477	87,864	30,220	48,008	6,588	19,428	509,920
1967-68	224,966	99,301	94,018	28,046	51,628	6,587	22,233	526,779
1968-69	228,560	100,502	102,452	30,300	49,364	6,947	25,371	543,496
1969-70	247,288	105,045	108,831	33,340	56,044	6,920	27,649	585,116
1970-71	251,899	108,646	110,165	34,399	60,671	5,805	28,979	600,564
<b>WORKING EXPENSES</b>								
				(a)	(a)	(a)	(a)	
1966-67	184,992	103,423	84,295	33,962	44,513	8,325	19,411	478,921
1967-68	194,939	105,084	87,435	34,610	47,745	8,751	21,308	499,872
1968-69	205,164	111,216	91,427	36,154	49,947	9,089	24,614	527,611
1969-70	217,660	118,558	96,530	39,040	54,992	9,031	27,156	562,967
1970-71	242,842	129,054	105,155	42,714	59,652	9,891	29,382	618,690
<b>NET EARNINGS(b)</b>								
1966-67	28,343	1,054	3,569	-3,742	3,496	-1,737	17	31,000
1967-68	30,027	-5,784	6,583	-6,564	3,883	-2,164	925	26,906
1968-69	23,396	-10,714	11,025	-5,854	-583	-2,142	757	15,885
1969-70	29,628	-13,513	12,301	-5,699	1,051	-2,111	493	22,150
1970-71	9,057	-20,408	5,010	-8,315	1,019	-4,086	-403	-18,126

(a) Includes provision of reserves for depreciation.

(b) Excess of gross earnings over working expenses as shown in this table.

**GOVERNMENT RAILWAYS: SURPLUS OR DEFICIT, SYSTEMS, 30 JUNE 1971**  
(\$'000)

System	Net earnings—excess of gross earnings over working expenses	Plus grants and other earnings payable to railways				Less other expenses charged to railways					Surplus (+) or deficit (—)
		State Government grants	Road motor earnings	Other	Total	Interest and exchange	Sinking fund	Road motor expenses (a)	Other	Total	
New South Wales	9,057	(b)3,200	..	..	3,200	30,729	6,952	..	(c)1,054	38,736	—26,478
Victoria	—20,408	(d)49	64	..	113	8,172	365	161	..	8,698	—28,993
Queensland	5,010	..	..	..	..	26,368	(e)92	..	(f)950	27,411	(g)—22,401
South Australia	—8,315	(h)14,500	235	..	14,735	6,815	..	295	(i)935	8,045	—1,624
Western Australia	1,019	..	1,246	..	1,246	11,604	..	1,366	..	12,970	—10,705
Tasmania	—4,086	..	..	(j)62	62	1,344	..	..	..	1,344	—5,368
Commonwealth	—403	..	..	..	..	..	..	..	..	..	—403
Australia	—18,126	17,749	1,545	62	19,356	85,032	7,410	1,822	2,940	97,203	—95,973

(a) Includes interest and exchange. (b) Grants to meet losses on country developmental lines, and to subsidise payments due to superannuation account. (c) Loan management and loan flotation expenses. (d) Kerang-Koondrook tramway recoup from Treasury. (e) Queensland 4ft 8½in gauge system only. (f) Demolished assets written off. (g) Includes deficit (\$891,298) on the Queensland 4ft 8½in gauge system. (h) Grants towards deficiency. (i) Interest and repayment under Railway Standardisation and Railway Equipment Agreements. (j) Miscellaneous goods revenue from rail-ferry service traffic not carried by rail and Commonwealth Government contribution towards cost of flood damage.

### Employment, salaries and wages

The average number of staff employed and salaries and wages paid (\$'000) during the year 1970-71 were as follows: N.S.W. 43,505 (\$182,439); Vic. 26,180 (\$101,506); Qld 22,568 (\$85,998); S.A. 8,944 (\$34,687); W.A. 10,303 (\$40,649); Tas. 2,153 (\$7,637); Cwlth 3,799 (\$15,893); Aust. 117,452 (\$468,809).

### Private railways

Private railways are operated over a range of gauges and are to be found in each State of the Commonwealth. These systems service agricultural areas, mining ventures, industrial complexes and ports. A range of commodities are carried, including coal, iron ore, other minerals and manufactured products. In recent years there has been considerable growth in the total route mileage of private railways, from an estimated 300 route miles in 1965, to approximately 965 by 1971. The construction of 582 miles of heavy duty railway for north-west Western Australia iron ore projects accounts for much of the increase.

Two private railways are currently under construction. These are a railway for Cliffs Western Australian Mining Company Proprietary Limited in north-west Western Australia, and a railway at Weipa in Queensland for the Comalco Company. The former, which will be used for the carriage of iron ore, will link Mount Enid with Port Lambert (approximately 104 miles). The latter will link Andoom with Weipa (approximately 13 miles) and will be used for the carriage of bauxite. These railways which will be of heavy duty standard gauge construction are both scheduled for completion in mid-1972.

In addition to the above, there are approximately 2,000 route miles of permanent privately owned sugar cane railways or 'tramways' along the north-east coast of Australia. The bulk of this is 2 ft 0 in gauge. Additional temporary lines are laid during the cane harvesting season. These lines connect 30 sugar mills to the Queensland Government Railway system. Other private railways exist within factory and industrial areas for the internal transport of goods and materials but at present no statistics are available as to the extent of the mileage involved and traffic task performed.

The carriage of passengers by private railways is now negligible; however, tonnages of freight carried are increasing as indicated in the following table.

**PRIVATE RAILWAYS: ESTIMATED DOMESTIC FREIGHT TRAFFIC TASK(a)**  
**1964-65 TO 1969-70**

(Source: Department of Shipping and Transport)

Year	Tons carried	Private as a percentage of total tons carried(b)	Ton-miles	Private as a percentage of total ton-miles performed(b)
	'000	per cent	million	per cent
1964-65	29,632	31.4	391	3.4
1965-66	30,752	32.3	427	3.7
1966-67	35,895	34.4	1,141	9.0
1967-68	43,273	37.8	2,008	14.1
1968-69	52,545	41.0	3,347	20.3
1969-70	65,591	44.3	5,715	39.0

(a) Includes tons and ton-miles performed by sugar tramways, but excludes internal industrial plant railways. (b) Total equals government plus private.

During the period 1964-65 to 1969-70 tonnages of freight carried increased by 121.4 per cent. During the same period freight ton-miles performed increased almost fourteen-fold. The extent of this growth has been such as to increase the private railway system's share of the total freight traffic task performed by all railways in Australia.

Mineral ores and concentrates are the predominant items of freight and, in contrast to the Government railways, carriage of general merchandise is of minor importance. The rapid growth of tons carried and ton-miles performed since 1964-65 reflects the growing traffic task performed by the Western Australian iron ore railways. In 1969-70 these railways alone carried 45 per cent of the total tonnage carried by all private railways, and accounted for 91 per cent of the ton-miles performed.

Details of location, ownership and operation of the major private railway systems is given in Year Book No. 56, 1970, page 364.



## TRAMWAY, TROLLEY-BUS, OMNIBUS, AND FERRY SERVICES

## Systems in operation

*Tramway and trolley-bus.* At 30 June 1971 tramway services were in operation in Melbourne, Bendigo and Ballarat in Victoria, and in Adelaide, South Australia. The last of the trolley-bus services ceased to operate in Australia with their replacement by omnibuses in Perth, Western Australia on 29 August 1969.

In many parts of Australia private lines used for special purposes in connection with the timber, mining, sugar, or other industries are often called tramways but they are more properly railways, and the traffic on them has nothing in common with that of the street tramways used for the conveyance of passengers, which are dealt with in this section. For further details, see page 356.

*Motor omnibus.* Services are operated by government or municipal authorities and private operators. Statistics are collected for government and municipal omnibus services located in all State capital cities; Canberra, Australian Capital Territory; Newcastle, New South Wales; Rockhampton Queensland; Fremantle and the Eastern Goldfields area, Western Australia; Launceston and Burnie, Tasmania; Darwin, Northern Territory; and for country road services operated by the Western Australian Government Railways. Particulars of motor omnibus services under the control of private operators for the States of Victoria, Queensland, South Australia, and Western Australia are given in the annual bulletin *Transport and Communication*.

*Ferry.* Ferry passenger services are operated in the following States: New South Wales, at Sydney and Newcastle; Western Australia, on the Swan River at Perth; Tasmania, on the Mersey River at Devonport. Control is exercised by both government authorities and private operators. Particulars of the operations of these services are given in previous issues of this Year Book and in the annual bulletin *Transport and Communication*. In Victoria and Queensland the services operated are not extensive. There are no ferry passenger services in South Australia.

## Government and municipal tramway, trolley-bus and omnibus services

Because of the development in recent years of the various forms of public road transport under the control of single authorities, and the gradual replacement of tramway and trolley-bus services by motor omnibus services, it is not possible to obtain separate statistics for all phases of the activities of each form of transport, particularly financial operations. The two following tables present combined statistics of public tramway and motor omnibus services with separate details shown for each form of transport where possible. The second table also shows some statistics for trolley-bus services up to 1969-70.

TRAMWAY, AND OMNIBUS SERVICES: GOVERNMENT AND MUNICIPAL STATES AND TERRITORIES, 1970-71

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Route-miles at 30 June—									
Tram(a) . . . . . miles		156		7					163
Omnibus . . . . . „	615	140	382	163	4,877	238	36	141	6,952
Vehicle-miles—									
Tram . . . . . „		15,619		416					16,035
Omnibus . . . . . „	44,434	7,018	14,224	10,384	24,391	5,447	755	3,360	110,013
Rolling stock at 30 June—									
Tram . . . . . number		758		26					784
Omnibus . . . . . „	1,890	273	666	376	795	283	34	152	4,469
Passenger-journeys—									
Tram . . . . . '000		111,386		1,588					112,974
Omnibus . . . . . „	229,892	22,753	67,168	39,671	58,054	20,797	1,533	7,778	447,646
Gross revenue(b)—									
Tram and omnibus . . . \$'000	31,685	20,521	10,017	6,881	9,624	2,321	301	1,159	82,510
Working expenses(c)—									
Tram and omnibus . . . \$'000	41,261	22,305	9,207	6,986	11,004	3,614	413	1,716	96,507
Net revenue—									
Tram and omnibus . . . \$'000	-9,576	-1,784	810	-104	-1,380	-1,293	-112	-557	-13,997
Employees at 30 June—									
Tram and omnibus . . . number	7,414	4,484	1,803	1,233	1,964	619	38	221	17,776
Accidents—									
Tram and omnibus(d)—									
Persons killed . . . number	5	10	2	1		3	1	49	21
Persons injured . . . „	1,326	574	64	129	260	56			2,459

(a) Gauge 4 ft 8½ in throughout. (b) Excludes government grants. (c) Includes provision of reserves for depreciation, etc., where possible. (d) Excludes accidents to employees.  
Minus sign (—) denotes deficit.

**TRAMWAY, TROLLEY-BUS AND OMNIBUS SERVICES: GOVERNMENT AND MUNICIPAL  
AUSTRALIA, 1966-67 TO 1970-71**

	1966-67	1967-68	1968-69	1969-70	1970-71
<b>Route-miles at 30 June—</b>					
Tram . . . . . miles	222	222	163	163	163
Trolley-bus . . . . . "	65	64	9	..	..
Omnibus . . . . . "	6,329	6,794	6,362	7,198	6,592
<b>Vehicle miles—</b>					
Tram . . . . . '000	23,310	22,813	20,038	16,492	16,035
Trolley-bus . . . . . "	2,594	2,038	1,018	66	..
Omnibus . . . . . "	98,531	99,357	102,049	108,940	110,013
<b>Rolling stock at 30 June—</b>					
Tram . . . . . number	1,004	1,004	771	780	784
Trolley-bus . . . . . "	149	138	50	..	..
Omnibus . . . . . "	3,469	3,571	4,210	4,345	4,469
<b>Passenger-journeys—</b>					
Tram . . . . . '000	186,346	179,280	149,055	115,297	112,974
Trolley-bus and omnibus . . . . . "	435,054	429,819	441,036	459,859	447,646
<b>Gross revenue(a)—</b>					
Tram, trolley-bus and omnibus \$'000	72,362	72,847	79,288	80,542	82,510
<b>Working expenses(b)—</b>					
Tram, trolley-bus and omnibus \$'000	77,078	79,199	84,649	85,929	96,507
<b>Net revenue—</b>					
Tram, trolley-bus and omnibus \$'000	-4,716	-6,350	-5,361	-5,387	-13,997
<b>Employees at 30 June—</b>					
Tram, trolley-bus and omnibus number	18,843	18,735	17,840	17,781	17,776
<b>Accidents—</b>					
Tram, trolley-bus and omnibus(c)—					
Persons killed . . . . . number	37	39	27	33	21
Persons injured . . . . . "	2,303	2,246	2,328	2,416	2,459

(a) Excludes government grants.  
(c) Excludes accidents to employees.

(b) Includes provision of reserves for depreciation, etc., where possible.

Minus sign (-) denotes deficit.

## MOTOR VEHICLES

The arrangements for the registration of motor vehicles and the licensing of drivers and riders are not uniform throughout Australia, since they are the function of a separate authority, or authorities, in each State and Territory. Particulars of registration, licences, fees payable, etc., in each State and Territory at 30 June 1971 are shown in *Transport and Communication*, Bulletin No. 62, 1970-71.

Tables in this section include vehicles owned by private individuals, local government authorities, State Governments, and the Commonwealth Government (excluding those belonging to the defence services).

### Motor vehicles on register

Details of motor vehicles on the register are compiled by up-dating motor vehicle census data from information made available by the various motor vehicle registration authorities in the States and Territories. Censuses of motor vehicles are taken periodically, and at these census dates considerably greater information concerning the particulars shown in the tables following is available. Particulars of the 1962 Census are shown in Year Book No. 53, 1967, *Transport and Communication*, Bulletin No. 54 1962-63 and in special census publications. A further census of motor vehicles on the register was taken at 30 September 1971 and the results are currently being processed.

## MOTOR VEHICLES ON REGISTER, BY TYPE OF VEHICLE(a)

State or Territory and year	Motor cars	Station wagons	Other motor vehicles								Motor cycles	Total
			Total	Utilities	Panel vans	Trucks	Other truck- types	Omnib- uses	Total			
31 December 1971—												
New South Wales . .	1,216,549	246,641	1,463,190	130,949	77,207	115,851	4,433	8,192	336,632	70,060	1,869,882	
Victoria . . .	945,391	200,962	1,146,353	92,494	40,313	94,504	3,869	5,296	236,476	33,935	1,416,764	
Queensland . . .	n.a.	n.a.	552,638	102,528	(b)	68,382	(c)	3,351	174,261	28,578	755,477	
South Australia . .	334,526	60,679	395,205	37,226	12,513	35,421	1,953	2,998	90,111	17,489	502,805	
Western Australia . .	284,855	69,358	354,213	n.a.	n.a.	n.a.	n.a.	n.a.	106,788	14,251	475,252	
Tasmania . . .	110,663	18,217	128,880	14,544	8,087	11,055	340	1,336	35,362	3,662	167,904	
Northern Territory	12,973	5,695	18,668	6,265	1,386	2,621	67	235	10,514	1,953	31,195	
Australian Capital Territory . . .	n.a.	n.a.	58,990	n.a.	n.a.	n.a.	n.a.	n.a.	8,146	2,830	69,966	
Australia . . .	n.a.	n.a.	4,118,137	n.a.	n.a.	n.a.	n.a.	n.a.	998,350	172,758	5,289,245	
31 December—												
1970 . . .	n.a.	n.a.	3,898,488	581,146	(b)	390,352	(d)	(d)	971,498	136,460	5,006,446	
1969 . . .	n.a.	n.a.	3,676,241	570,672	(b)	357,797	(c)	21,118	949,587	113,684	4,739,512	
1968 . . .	n.a.	n.a.	3,444,806	558,439	(b)	343,539	(c)	19,727	921,705	96,740	4,463,251	
1967 . . .	n.a.	n.a.	3,241,485	550,862	(b)	331,626	(c)	18,730	901,218	80,193	4,222,896	
1966 . . .	n.a.	n.a.	3,060,578	544,459	(b)	326,025	(c)	17,934	888,418	68,913	4,017,909	
1962(e) . . .	2,068,698	231,436	2,300,134	414,156	119,897	270,881	8,091	14,319	827,344	81,859	3,209,337	

(a) All figures after December 1962 are subject to revision. (b) Panel vans included with utilities. (c) Other truck-types included with trucks. (d) Other truck-types and omnibuses included with trucks. (e) Motor vehicle census figures.

## MOTOR VEHICLES(a) ON REGISTER PER 1,000 OF POPULATION STATES AND TERRITORIES, 1962 TO 1971

31 December—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1962(b) . . .	280	301	286	339	326	293	229	316	296
1967(c) . . .	343	351	354	379	393	366	288	396	355
1968(c) . . .	357	365	365	387	407	384	307	414	368
1969(c) . . .	373	376	379	402	426	398	324	426	383
1970(c) . . .	387	390	393	412	438	413	330	445	396
1971(c) . . .	403	401	409	425	454	428	357	465	411

(a) Excludes tractors, trailers, plant and equipment, etc. (b) Based on motor vehicle census figures. (c) Subject to revision.

## Registrations of new motor vehicles

Particulars of registrations of new motor vehicles are shown by type and make of vehicle in the annual bulletin *Transport and Communication*, and by type, make, and horsepower of vehicle in monthly, quarterly and annual bulletins of Motor Vehicle Registrations.

In these statistics 'registrations' means registrations processed by the motor vehicle registration authorities in the States and Territories during the period.

## REGISTRATIONS OF NEW MOTOR VEHICLES, BY TYPE OF VEHICLE

State or Territory and year	Motor cars	Station wagons	Ambulances and hearses	Utilities	Panel vans	Trucks	Other truck-types	Omnibuses	Motor cycles	Total
1971—										
New South Wales . . .	139,550	19,893	154	11,489	10,870	7,914	449	920	20,768	212,007
Victoria . . .	94,582	14,139	79	6,682	4,085	6,655	514	547	10,421	137,704
Queensland . . .	44,332	7,775	80	5,861	2,238	(a)6,274	(a)6	176	7,186	73,928
South Australia . . .	33,563	4,134	52	2,410	1,409	1,925	149	337	4,474	48,453
Western Australia . . .	32,900	5,889	44	4,829	2,636	2,816	93	184	3,306	52,697
Tasmania . . .	10,633	1,282	11	1,076	624	690	24	97	851	15,288
Northern Territory	1,456	584	2	1,065	185	417	12	29	1,021	4,771
Australian Capital Territory . . .	5,653	859	3	410	436	209	16	104	759	8,449
Australia . . .	362,669	54,555	425	33,822	22,483	26,900	1,263	2,394	48,786	553,297
1970 . . .	358,181	54,880	426	35,881	19,275	29,476	1,289	2,190	32,701	534,299
1969 . . .	343,275	57,604	355	36,510	17,266	29,700	1,407	2,041	25,386	513,544
1968 . . .	310,051	58,569	393	34,734	16,318	26,705	970	1,745	22,887	472,372
1967 . . .	275,594	59,947	329	34,726	15,546	24,590	871	1,470	17,306	430,379
1966 . . .	245,175	61,513	349	33,154	13,351	22,970	837	1,399	9,738	388,486

(a) Most other truck-types included with trucks.



## Drivers' and riders' licences

At 30 June 1971 the numbers of licences in force to drive or ride motor vehicles were: New South Wales, 2,134,870; Victoria, 1,566,396; South Australia, 544,115; Western Australia, 450,837; Tasmania, 172,854; Northern Territory, 37,026; Australian Capital Territory, 95,622. Particulars are not available for Queensland.

## ROAD TRAFFIC ACCIDENTS

## Accidents involving casualties, persons killed, persons injured

## ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): NUMBER OF ACCIDENTS, PERSONS KILLED OR INJURED STATES AND TERRITORIES, 1970

State or Territory	Number of accidents	Persons killed	Persons injured	Per 100,000 of mean population			Per 10,000 motor vehicles registered(b)		
				Number of accidents	Persons killed	Persons injured	Number of accidents	Persons killed	Persons injured
New South Wales	25,434	1,309	34,886	563	29	772	148	8	203
Victoria	16,435	1,061	23,737	477	31	689	124	8	180
Queensland	7,869	537	10,940	439	30	610	114	8	158
South Australia	7,424	349	10,484	641	30	905	157	7	222
Western Australia	5,218	351	7,373	526	35	743	122	8	172
Tasmania	1,425	118	2,171	368	30	560	91	7	138
Northern Territory	528	42	714	672	53	908	205	16	278
Australian Capital Territory	877	31	1,249	666	24	948	152	5	217
Australia	65,210	3,798	91,554	521	30	732	134	8	188

(a) Accidents reported to the police which occurred in public thoroughfares and which resulted in death within thirty days or in bodily injury to an extent requiring surgical or medical treatment. (b) Average number of motor vehicles (excluding tractors, plant, equipment, etc.) on register.

## ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): NUMBER OF ACCIDENTS, PERSONS KILLED OR INJURED STATES AND TERRITORIES, 1966 TO 1970

Year	N.S.W.	Vic.	Qld	S.A. (b)	W.A.	Tas.	N.T.	A.C.T.	Total			
									Num- ber	Per 100,000 of mean popu- lation	Per 10,000 moto vehicles regis- tered(c)	
Accidents involving casualties—												
1966 . . .	20,919	14,084	6,878	7,031	4,346	1,377	310	593	55,538	479	141	
1967 . . .	21,610	14,331	7,015	7,242	4,659	1,342	359	695	57,253	484	139	
1968 . . .	22,774	15,377	7,118	6,421	4,708	1,240	357	764	58,759	488	135	
1969 . . .	24,164	16,527	7,494	6,895	4,809	1,416	500	792	62,597	509	136	
1970 . . .	25,434	16,435	7,869	7,424	5,218	1,425	528	877	65,210	521	134	
Persons killed—												
1966 . . .	1,143	955	466	270	253	104	34	17	3,242	28	8	
1967 . . .	1,117	887	502	253	256	101	27	23	3,166	27	8	
1968 . . .	1,211	949	477	275	320	118	18	14	3,382	28	8	
1969 . . .	1,188	1,011	556	251	311	114	45	26	3,502	28	8	
1970 . . .	1,309	1,061	537	349	351	118	42	31	3,798	30	8	
Persons injured—												
1966 . . .	28,981	20,160	9,936	9,369	5,997	2,092	446	856	77,837	671	198	
1967 . . .	29,501	20,636	9,850	9,955	6,426	2,095	541	1,017	80,021	677	194	
1968 . . .	30,919	22,095	10,151	8,902	6,553	1,928	512	1,150	82,210	683	198	
1969 . . .	32,752	23,797	10,406	9,961	6,788	2,264	727	1,169	87,864	714	191	
1970 . . .	34,886	23,737	10,940	10,484	7,373	2,171	714	1,249	91,554	732	188	

(a) See footnote (a) to previous table. (b) Prior to 1 October 1967 includes accidents in which the injured persons did not require surgical or medical treatment and the number of persons injured in accidents who did not require surgical or medical treatment. (c) See footnote (b) to previous table.

**Types of road user killed or injured**

Responsibility for cause of accident is not indicated by this classification.

**ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): PERSONS KILLED OR INJURED  
TYPES OF ROAD USER INVOLVED, STATES AND TERRITORIES, 1970**

Type of road user	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total
PERSONS KILLED									
Drivers of motor vehicles	494	393	233	144	137	32	16	11	1,460
Motor cyclists	93	24	22	12	8	10	..	4	173
Pedal cyclists	26	40	13	10	4	3	1	1	98
Passengers (all types)(b)	404	352	156	128	120	46	18	9	1,233
Pedestrians	291	252	111	55	74	26	7	6	822
Other classes(c)	1	..	2	..	8	1	..	..	12
<b>Total</b>	<b>1,309</b>	<b>1,061</b>	<b>537</b>	<b>349</b>	<b>351</b>	<b>118</b>	<b>42</b>	<b>31</b>	<b>3,798</b>
PERSONS INJURED									
Drivers of motor vehicles	13,710	9,725	4,493	4,315	3,247	883	318	542	37,233
Motor cyclists	2,967	823	784	812	361	137	50	127	6,061
Pedal cyclists	771	946	442	513	247	36	11	46	3,012
Passengers (all types)(b)	13,051	9,477	4,306	4,017	2,806	907	276	442	35,282
Pedestrians	4,346	2,735	907	827	689	205	58	85	9,852
Other classes(c)	41	31	8	..	23	3	1	7	114
<b>Total</b>	<b>34,886</b>	<b>23,737</b>	<b>10,940</b>	<b>10,484</b>	<b>7,373</b>	<b>2,171</b>	<b>714</b>	<b>1,249</b>	<b>91,554</b>

(a) Accidents reported to the police which occurred in public thoroughfares and which resulted in death within thirty days or in bodily injury to an extent requiring surgical or medical treatment. (b) Includes pillion riders. (c) Includes bystanders, tram drivers, riders of horses and drivers of animal-drawn vehicles.

**Age groups of persons killed or injured****ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): PERSONS KILLED OR INJURED  
BY AGE GROUP: STATES AND TERRITORIES, 1970**

Age group (years)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
PERSONS KILLED									
Under 5	52	44	10	7	14	4	2	1	134
5 and under 7	20	20	3	4	3	5	..	1	56
7 " " 17	109	95	48	35	31	23	1	4	346
17 " " 21	233	184	100	67	58	25	4	8	679
21 " " 30	302	209	111	61	76	24	19	6	808
30 " " 40	118	117	50	32	34	6	6	3	366
40 " " 50	124	108	59	38	41	7	5	1	383
50 " " 60	119	103	65	39	42	6	3	2	379
60 and over	230	181	91	66	52	17	2	5	644
Not stated	2	..	..	..	..	1	..	..	3
<b>Total</b>	<b>1,309</b>	<b>1,061</b>	<b>537</b>	<b>349</b>	<b>351</b>	<b>118</b>	<b>42</b>	<b>31</b>	<b>3,798</b>
PERSONS INJURED									
Under 5	997	809	314	262	238	54	15	27	2,716
5 and under 7	616	422	165	153	117	38	20	21	1,552
7 " " 17	3,765	2,745	1,360	1,326	815	304	49	145	10,509
17 " " 21	8,140	5,059	2,695	2,212	1,624	607	115	362	20,814
21 " " 30	8,202	5,662	2,363	1,987	1,524	435	247	331	20,751
30 " " 40	3,959	2,667	1,114	927	765	194	134	144	9,904
40 " " 50	3,545	2,416	1,035	884	697	154	67	101	8,899
50 " " 60	2,643	1,796	870	629	480	137	33	61	6,649
60 and over	2,510	1,797	807	593	479	144	13	46	6,389
Not stated	509	364	217	1,511	634	104	21	11	3,371
<b>Total</b>	<b>34,886</b>	<b>23,737</b>	<b>10,940</b>	<b>10,484</b>	<b>7,373</b>	<b>2,171</b>	<b>714</b>	<b>1,249</b>	<b>91,554</b>

(a) See footnote (a) to table above.

## Types of accidents

**ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES<sup>(a)</sup>**  
**NUMBER OF ACCIDENTS AND PERSONS KILLED OR INJURED, BY TYPE OF ACCIDENT**  
**STATES AND TERRITORIES, 1970**

<i>Type of accident</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
NUMBER OF ACCIDENTS									
Collisions between vehicles . . . . .	14,005	9,279	3,826	4,283	3,064	731	194	535	35,917
Vehicle overturning or leaving road . . . . .	3,438	971	2,583	857	1,188	401	191	204	9,833
Vehicle colliding with pedestrian . . . . .	4,364	2,741	957	806	735	223	58	87	9,971
Vehicle colliding with fixed object <sup>(b)</sup> . . . . .	3,330	3,218	326	1,347	143	56	66	33	8,519
Passenger accidents . . . . .	129	80	36	39	24	6	8	12	334
Vehicle colliding with animal . . . . .	164	81	91	37	23	6	5	1	408
Other . . . . .	4	65	50	55	41	2	6	5	228
<b>Total . . . . .</b>	<b>25,434</b>	<b>16,435</b>	<b>7,869</b>	<b>7,424</b>	<b>5,218</b>	<b>1,425</b>	<b>528</b>	<b>877</b>	<b>65,210</b>
PERSONS KILLED									
Collisions between vehicles . . . . .	560	466	192	190	130	54	15	20	1,627
Vehicle overturning or leaving road . . . . .	231	74	212	49	129	36	16	5	752
Vehicle colliding with pedestrian . . . . .	291	246	105	51	75	26	7	6	807
Vehicle colliding with fixed object <sup>(b)</sup> . . . . .	221	268	15	56	3	1	2	..	566
Passenger accidents . . . . .	3	6	2	2	6	..	2	..	21
Vehicle colliding with animal . . . . .	3	1	3	..	1	..	..	..	8
Other . . . . .	..	..	8	1	7	1	..	..	17
<b>Total . . . . .</b>	<b>1,309</b>	<b>1,061</b>	<b>537</b>	<b>349</b>	<b>351</b>	<b>118</b>	<b>42</b>	<b>31</b>	<b>3,798</b>
PERSONS INJURED									
Collisions between vehicles . . . . .	20,830	14,809	5,884	6,389	4,727	1,220	295	848	55,002
Vehicle overturning or leaving road . . . . .	4,763	1,501	3 525	1,295	1,668	653	248	261	13,914
Vehicle colliding with pedestrian . . . . .	4,327	2,619	902	803	706	208	58	84	9,707
Vehicle colliding with fixed object <sup>(b)</sup> . . . . .	4,635	4,558	422	1,845	173	76	87	38	11,834
Passenger accidents . . . . .	134	77	35	43	23	6	7	12	337
Vehicle colliding with animal . . . . .	113	103	116	43	32	7	8	1	503
Other . . . . .	4	70	56	66	44	1	11	5	257
<b>Total . . . . .</b>	<b>34,886</b>	<b>23,737</b>	<b>10,940</b>	<b>10,484</b>	<b>7,373</b>	<b>2,171</b>	<b>714</b>	<b>1,249</b>	<b>91,554</b>

<sup>(a)</sup> Accidents reported to the police which occurred in public thoroughfares and which resulted in death within thirty days or in bodily injury to an extent requiring surgical or medical treatment. <sup>(b)</sup> Includes parked vehicles.



## ROADS

## Summary of roads used for general traffic

*Proclaimed or declared roads.* The table following is a summary of the roads proclaimed or declared under the Acts of the several States relative to the operations of the central road authorities, and shows the lengths of various classes proclaimed or declared as at 30 June 1971. The central road authority in each State assumes responsibility under the Act for the whole, or a proportion, of the cost of construction and/or maintenance of these roads, the extent varying from State to State and with the class and locality of the roads. Before proclamation of a main road, consideration is given, in general, to the following points: availability of funds; whether the road is, or will be, within one of several classes of main trunk routes; the value of the roads as connecting links between centres of population or business; whether the district is, or will be, sufficiently served by railways. Provision is also made in some States for the declaration of roads other than main roads. The absence of a particular class in any State does not necessarily imply that there are no roads within that State that might be so classified; the classes are restricted only to roads proclaimed or declared under the Acts. A further point to make is that, through various causes, e.g. insufficiency of funds, man-power or materials, etc., construction or maintenance may not keep pace with gazettals of mileages, and, therefore, the condition of a road may not match its status.

PROCLAIMED OR DECLARED ROADS: LENGTHS, STATES, 30 JUNE 1971  
(Miles)

<i>Class of road</i>	<i>N.S.W.</i>	<i>Vic.(a)</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.(b)</i>	<i>Tas.</i>	<i>Total</i>
State highways . .	6,566	(c)4,499	6,311	8,156	7,656	1,197	64,975
Trunk roads . . .	4,332	9,075	77			663	
Ordinary main roads . .	11,408		5,035				
<i>Total main roads . .</i>	<i>22,306</i>	<i>13,574</i>	<i>11,423</i>	<i>8,156</i>	<i>7,656</i>	<i>1,860</i>	<i>64,975</i>
Secondary roads . .	(d)170	..	(e)8,619	..	5,437	188	14,414
Developmental roads . .	2,670	..	4,778	..	..	85	7,533
Tourist roads . . .	243	483	..	..	..	47	773
Other roads . . .	..	(f)646	..	..	..	93	739
<i>Total other roads . .</i>	<i>3,083</i>	<i>1,129</i>	<i>13,397</i>	<i>..</i>	<i>5,437</i>	<i>412</i>	<i>23,458</i>
<b>Grand total . . .</b>	<b>25,389</b>	<b>14,703</b>	<b>24,820</b>	<b>8,156</b>	<b>13,093</b>	<b>2,273</b>	<b>88,433</b>

(a) Includes only roads declared by the Country Roads Board. Does not include 8 miles of metropolitan freeways constructed by the Melbourne and Metropolitan Board of Works. (b) Main Roads Department revised series. (c) Includes freeways. (d) Metropolitan only. (e) Includes mining access roads, farmers' roads and tourist tracks. (f) Forest roads.

*Total roads.* The following table represents an attempt to classify all the roads open for general traffic in Australia, at the latest dates available, according to States and Territories and to certain broad surface groups. The figures in the table for the States are obtained from the Deputy Commonwealth Statistician in each State, and are derived mainly from local government sources.

ALL ROADS OPEN FOR GENERAL TRAFFIC  
LENGTHS, STATES AND TERRITORIES, 30 JUNE 1971  
(Miles)

Surface of roads	N.S.W.	Vic.	Qld	S.A.	W.A. (a)	Tas.	N.T.	A.C.T.	Total
Bitumen or concrete . .	33,493	32,303	21,184	9,775	15,980	3,765	2,584	645	119,729
Gravel, crushed stone or other improved surface . . .	41,659	28,789	18,364	18,788	14,948	8,318	802	246	131,914
Formed only . . .	28,169	20,983	40,459	7,638	27,308	764	1,992	26	297,741
Cleared only . . .	26,424	19,523	40,069	39,316	39,110		b 5,960	..	
<b>Total . . .</b>	<b>129,745</b>	<b>101,598</b>	<b>120,076</b>	<b>75,517</b>	<b>97,348</b>	<b>12,847(b)</b>	<b>11,338</b>	<b>918</b>	<b>549,384</b>

(a) Main Roads Department revised series. (b) Excludes stock routes.

Further information on roads, including financial particulars, is included in Chapter 18. Public Authority Finance.

### Australian Road Research Board

The Australian Road Research Board was established by the road authorities of the Commonwealth and State Governments in 1960 as a national centre for road research. The Board was incorporated in January 1965 as a public company limited by guarantee, memoranda and articles of association being drafted in general conformity with the constitution which had been accepted in 1960. The company members are the Commonwealth of Australia, the commissioners of the central road authorities in New South Wales, Queensland, South Australia, and Western Australia, the Department of Public Works, Tasmania, and the Country Roads Board, Victoria. The Director-General of the Commonwealth Department of Public Works and the departmental heads of the other road authorities constitute the Board, which controls all policy and activities. Finance for all activities has been provided by the company members on an agreed basis.

The objectives of A.R.R.B. include planning an adequate programme of research and development, arranging for individual projects to be carried out directly and by co-operating organisations, and providing conferences and publications to bring these and other advances to everyone interested in roads. Publications include *Proceedings* of biennial national research conferences commencing in 1962, the journal *Australian Road Research* issued four times a year, and separate reports and bulletins resulting from special research projects. The following list of possible subjects indicates the range of studies provided for in the original constitution: road planning, location, design, safety, materials, construction, maintenance, structures, equipment, traffic and transport, economics, administration, financing, management, accounting, and any other matters affecting the provision, upkeep, use, protection, and development of roads. In planning a creative programme the Board continues to look for those subjects which seem to offer the highest profit to road engineers and the community.

The work on research projects is carried out either directly by the Board's own staff, in many cases acting in co-operation with the road authorities of the various governments, or through co-operative projects established with universities. The Board has endeavoured to provide or sustain the additional staff required for these external projects, but university staff members furnish advice and co-operation in all parts of these studies.

As with most research organisations, the Board has made very full use of systematic consultation through various advisory groups. Members of these groups have been recruited from persons with the ability to contribute, who were prepared to serve as individuals and not as representatives of particular organisations. In an attempt to secure completely unfettered counsel, most of the members of the advisory groups were drawn from outside the Board and its staff. The various committees include a general Advisory Council and several particular types of specialist committees. In addition, the technical committees of the National Association of Australian State Road Authorities have, from the initiation of A.R.R.B., been a continuing and valuable source of advice and consultation. In this way, therefore, exceedingly valuable advice has been obtained from individuals drawn from the State road authorities, local authorities, C.S.I.R.O., Australian universities, several Commonwealth departments, and from private companies and consultants.

### Commonwealth Bureau of Roads

The Commonwealth Bureau of Roads is a Statutory Authority established under the provisions of the *Commonwealth Bureau of Roads Act 1964*. The Bureau consists of a full-time Chairman and two part-time members appointed by the Governor-General and is served by a small secretariat. Broadly, the responsibilities of the Bureau are to advise the Commonwealth Government, through the Minister for Shipping and Transport, on matters relating to roads and road transport and government financial assistance in this area.

## CIVIL AVIATION

### Department of Civil Aviation

Control of civil aviation in Australia is exercised by the Department of Civil Aviation which was established in 1939 to take over from the Civil Aviation Board the regulation of civil aviation in Australia. The Department's jurisdiction covers not only Australia but also Papua New Guinea and areas of the Indian and Pacific Oceans. Year Books Nos 16, 19 and 38 trace the establishment of civil aviation control in Australia and the appropriate Acts of Parliament and Regulations under which this control is exercised. The present functions of the Department are shown in Year Book No. 51, pages 578-9, and further details about its operations are given in the annual reports to the Commonwealth Parliament by the Minister for Civil Aviation.

### Regular air services within Australia

*Interstate services.* Scheduled interstate services with passenger and all-freight aircraft are provided by two airlines only, the private enterprise airline Ansett Airlines of Australia (a subsidiary of Ansett Transport Industries) and the Commonwealth-owned Trans-Australia Airlines. All principal routes are competitive, with both airlines providing equal capacities in accord with legislation passed by the Commonwealth Parliament. The two principal Acts which establish the legislative basis of this controlled competition are the *Airlines Agreement Act* 1952–1961 and the *Airlines Equipment Act* 1958. The Airlines Equipment Act established the machinery for the achievement and maintenance of comparable, but not necessarily identical, aircraft fleets between T.A.A. and Ansett Airlines of Australia, and is designed to prevent the provision of excess aircraft capacity. The Airlines Agreement Act established the basis of control of the two-airline competitive system and extended this machinery to 1977.

In addition to purely interstate services, both Ansett Airlines of Australia and Trans-Australia Airlines operate routes to Papua New Guinea and non-competitive intrastate routes in Australia. The Ansett Airlines of Australia non-competitive routes radiate mainly from Melbourne, while those of Trans-Australia Airlines are located within Queensland. In addition, Trans-Australia Airlines operate services within Papua New Guinea in competition with Ansett Airlines of Papua New Guinea.

At 30 June 1971 the Ansett Airlines of Australia fleet included six Boeing 727's, ten DC-9's, eleven Friendships, three Carvairs, one Twin Otter DHC-6, one DC-4 and two helicopters. At the same date Trans-Australia Airlines operated a fleet of six Boeing 727's, ten DC-9's, thirteen Friendships, six Twin Otter DHC-6 and one DC-3.

*Intrastate services.* In addition to the intrastate services operated by Ansett Airlines of Australia and Trans-Australia Airlines there are a number of smaller regional airlines operating from Sydney (Airlines of New South Wales and East-West Airlines), Adelaide (Airlines of South Australia), Perth (MacRobertson Miller Airlines), and Alice Springs (Connair). With the exception of Connair, which provides regular service to outback homesteads and communities, all of these are concerned primarily with traffic moving to and from the respective capital city. With the exception of the independently owned East-West Airlines and Connair, all regional airlines are subsidiaries of Ansett Transport Industries. The larger aircraft used by these regional airlines are Fellowships, Friendships and Convairs. Connair uses smaller aircraft types.

*Commuter services.* These are not airline services but regular flights by charter firms with small single and twin-engined aircraft operating to fixed and published timetables. They provide regular air links between many centres, towns and country areas which are either not served by the major airlines or have no direct air service with their capital or nearest major provincial city. The first commuter service approved was for Opal Air Pty Ltd, of Coober Pedy (S.A.), to operate between Adelaide and the South Australian opal fields. At 30 June 1971 eighteen charter operators were operating commuter services in Australia. Details of the operations of these commuter services are excluded from the statistics shown in this section.

*Internal operations.* Particulars of the revenue operations of all regular internal air services during each of the years 1966–67 to 1970–71 are set out in the next table.

**CIVIL AVIATION: OPERATIONS OF REGULAR INTERNAL SERVICES  
AUSTRALIA(a), 1966-67 TO 1970-71**

		1966-67	1967-68	1968-69	1969-70	1970-71
Hours flown . . . . .	number	255,510	240,801	244,606	251,582	258,793
Miles flown . . . . .	'000	56,759	56,724	60,348	66,241	71,212
Passengers—						
Embarkations . . . . .	number	4,424,652	4,668,153	5,184,828	5,911,002	6,340,036
Passenger-miles . . . . .	'000	1,972,469	2,125,314	2,401,783	2,802,717	3,090,837
Freight—						
Tons uplifted . . . . .	short tons	82,056	85,063	89,947	100,100	100,752
Ton-miles(b) . . . . .	'000	40,148	42,320	45,521	51,021	53,457
Mail—						
Tons uplifted . . . . .	short tons	9,587	9,417	9,876	10,625	10,931
Ton-miles(b) . . . . .	'000	5,144	5,174	5,498	5,950	6,390

(a) Includes flights of all Australian-owned airlines, with the exception of those of Qantas Airways Limited, between airports located within the Commonwealth. (b) In terms of short tons.



*Internal passenger embarkations and disembarkations*

Traffic statistics have been compiled by aggregating for all individual airline flights the traffic loaded and unloaded at each airport. Flights between Australia and Papua New Guinea and Australia and Norfolk Island are included. At ports where different flights connect, figures are overstated to the extent of the through traffic transferring between flights.

**INTERNAL AIRWAYS PASSENGER EMBARKATIONS AND  
DISEMBARKATIONS AT PRINCIPAL AUSTRALIAN AIRPORTS  
1966-67 TO 1970-71**

<i>Airport</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
Sydney . . .	2,435,284	2,641,147	2,933,795	3,390,322	3,515,231
Melbourne . . .	1,880,860	2,043,542	2,278,032	2,603,320	2,750,602
Brisbane . . .	854,370	937,660	1,009,060	1,184,846	1,347,118
Adelaide . . .	770,408	863,652	930,207	1,016,689	1,019,320
Canberra . . .	341,058	410,701	461,888	541,791	596,171
Perth . . .	278,662	315,744	357,236	420,603	510,328
Hobart . . .	178,314	182,459	196,335	200,638	222,397
Townsville . . .	145,161	188,761	168,247	197,107	197,942
Launceston . . .	159,402	156,443	171,612	179,614	197,500
Coolangatta . . .	97,343	85,543	102,764	132,102	166,239
Cairns . . .	86,598	92,048	101,031	127,252	158,986
Mackay . . .	72,407	78,179	87,313	95,841	125,220
Darwin . . .	57,557	65,535	78,165	98,523	118,375
Rockhampton . . .	65,777	68,150	74,760	83,883	97,264
Devonport . . .	55,213	61,250	68,125	68,257	71,426
Mount Isa . . .	33,507	34,013	37,423	52,272	67,938
Wynyard . . .	51,932	54,888	57,132	63,041	65,563
Alice Springs . . .	28,419	34,953	39,549	52,522	57,299
Dubbo . . .	44,852	49,856	51,775	56,014	55,574
Wagga . . .	53,273	46,314	49,519	54,378	52,181
Kingscote . . .	44,764	44,316	45,993	50,878	51,135
Tamworth . . .	38,141	41,960	46,558	51,640	50,870

**International activity**

*International organisations.* A full report of the formation of the International Civil Aviation Organization, the Commonwealth Air Transport Council, and the South Pacific Air Transport Council appeared in Year Book No. 37, and particulars of subsequent activity in the international field were included in No. 38. The International Civil Aviation Organization had a membership of 120 nations in June 1971. Australia has continued its position as a member of the Council, which it has held since I.C.A.O. was established in 1947. Further details will be found in Year Book No. 40 and earlier issues.

*International agreements.* Australia had air service agreements in force with twenty-two countries at 31 December 1971. They were Austria, Britain, Canada, Ceylon, France, Federal Republic of Germany, Greece, India, Indonesia, Ireland, Italy, Japan, Lebanon, Malaysia, Nauru, Netherlands, New Zealand, Singapore, Republic of South Africa, Thailand, United Arab Republic, and the United States of America. Under these agreements Australia is granted rights to operate services between Australia to and through the countries in question; these rights are exercised by Australia's international airline Qantas. In return, the designated airlines of the other countries which are partners to these agreements are granted traffic rights in Australia. Australia also had air service arrangements with fifteen other countries at 31 December 1971. These were Bulgaria, Burma, Republic of Khmer (formerly Cambodia), Republic of China (Taiwan), Iran, Laos, Mauritius, Mexico, the Philippines, Portugal, Saudi Arabia, Syria, Turkey, the Republic of Vietnam, and Yugoslavia. Qantas also operates services through several of these countries under these arrangements and in other cases overflies the country concerned.

*International air services.* At 30 June 1971, nineteen overseas international airlines were operating regular scheduled services to Australia. These are: Air-India (India), Air Nauru (Nauru), Air New Zealand (New Zealand), Alitalia (Italy), American Airlines (United States of America), British Overseas Airways Corporation (Britain), Canadian Pacific Air Lines (Canada), Cathay Pacific (Britain), Deutsche Lufthansa (Federal Republic of Germany), Fiji Airways (Fiji), Garuda (Indonesia), Japan Air Lines (Japan), K.L.M. Royal Dutch Airlines (Netherlands), Malaysia-Singapore Airlines (Malaysia and Singapore), Pan American World Airways (United States of America), Philippine Air Lines (Philippines), South African Airways (Republic of South Africa), Thai International (Thailand) and Union de Transports Aeriens (France). Trans-Australia Airlines operates between Darwin and Portuguese Timor under charter to Transportes Aereos de Timor. Qantas, Australia's international airline, operates a fleet of twenty-eight aircraft of which twenty-two are Boeing 707-338C jet aircraft and four are Boeing 747B superjet aircraft. All the shares in Qantas Airways Limited are owned by the Commonwealth Government.

*International operations.* The table following shows particulars of international airline traffic during 1970-71 moving into and out of an area which embraces the Commonwealth of Australia, Papua New Guinea, and Norfolk Island. These figures do not include traffic between Australia and Papua New Guinea and Norfolk Island.

**CIVIL AVIATION: INTERNATIONAL AIRLINE TRAFFIC  
TO AND FROM AUSTRALIA(a), 1970-71**

Type of traffic	Aircraft movements	Passengers	Freight	Mail
Traffic to Australia—			short tons	short tons
Qantas Airways Limited . . . . .	3,510	265,504	9,710	796
Other airlines . . . . .	5,022	350,195	10,513	2,524
<b>All airlines . . . . .</b>	<b>8,532</b>	<b>615,699</b>	<b>20,223</b>	<b>3,320</b>
Traffic from Australia—				
Qantas Airways Limited . . . . .	3,525	256,762	7,035	1,328
Other airlines . . . . .	5,010	326,687	6,733	780
<b>All airlines . . . . .</b>	<b>8,535</b>	<b>583,449</b>	<b>13,768</b>	<b>2,107</b>

(a) Australian mainland and adjacent Territories (Papua New Guinea and Norfolk Island).

Particulars of revenue operations of Australia's regular overseas services are shown in the following table. These operations include all stages of Qantas flights linking Australia with external territories and overseas countries, and stages external to the Commonwealth for flights of other Australian-owned airlines; they exclude flights over stages located within Papua New Guinea.

**CIVIL AVIATION: OPERATIONS OF AUSTRALIA'S REGULAR OVERSEAS SERVICES  
1966-67 TO 1970-71**

	1966-67	1967-68	1968-69	1969-70	1970-71
Hours flown . . . . . number	66,840	70,611	74,757	84,684	97,307
Miles flown . . . . . '000	29,201	31,914	33,591	37,537	43,711
Passengers—					
Embarkations . . . . . number	466,849	562,855	642,524	751,315	839,629
Passenger-miles . . . . . '000	1,608,868	1,970,008	2,247,241	2,498,180	2,763,179
Freight—					
Tons uplifted . . . . . short tons	12,259	13,733	18,537	21,165	23,650
Ton-miles(a) . . . . . '000	62,939	67,733	92,488	103,717	106,262
Mail—					
Tons uplifted . . . . . short tons	2,697	3,170	2,862	2,925	3,107
Ton-miles(a) . . . . . '000	16,500	19,209	15,680	15,143	15,659

(a) In terms of short tons.

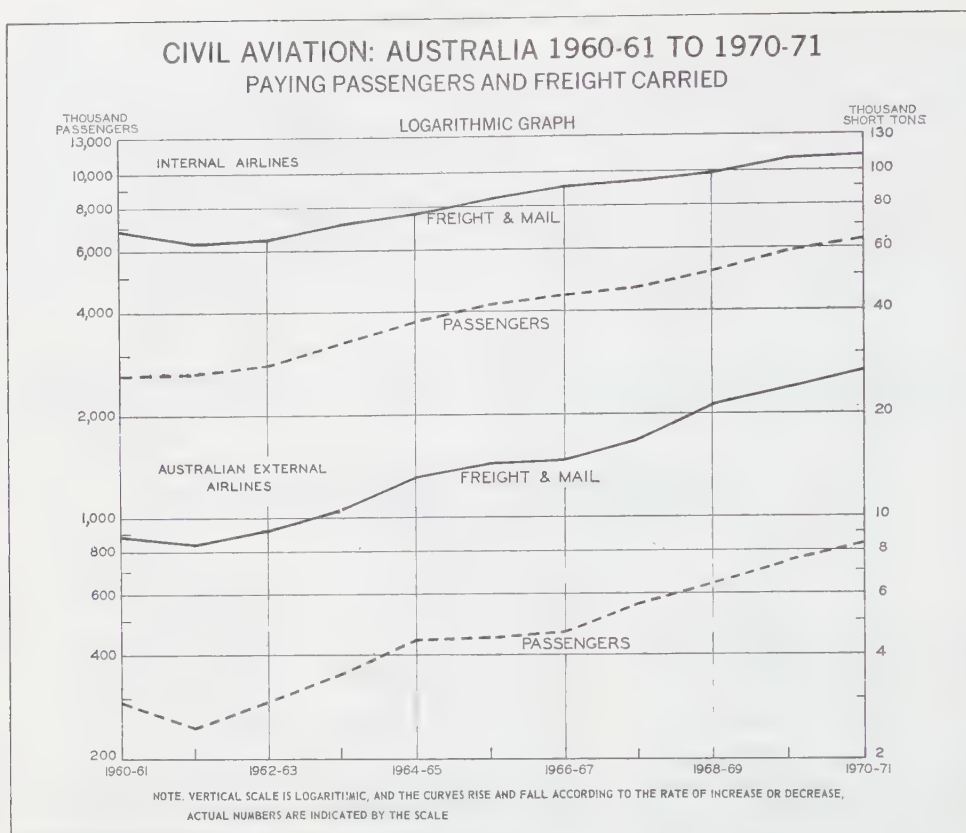


PLATE 29

### General aviation

General aviation activity, which covers all non-airline operations such as charter, aerial work and private flying, has grown rapidly throughout Australia in the post-war period so that now it is an important sector of the Australian aviation industry. In 1971, hours flown totalled 1,155,000 compared with 485,000 hours flown by Australian airline aircraft. At 30 June 1971, aircraft employed in general aviation numbered 3,609.

### Aerodromes

The number of aerodromes throughout Australia and its External Territories at 30 June 1971 was 708. One hundred and seventeen were owned by the Commonwealth Government and 591 by local authorities and private interests. Capital expenditure on aerodrome and building construction was \$39.7 million in 1970-71. Maintenance expenditure on Commonwealth-owned aerodromes during 1970-71 was \$2.52 million, and development grants to licensed aerodromes participating in the Local Ownership Plan totalled \$770,000.

### Airways facilities

A total of 388 navigational aids were in service at 30 June 1971. The total includes 244 non-directional beacons (NDB), 99 distance measuring equipment (DME), 21 visual-aural ranges (VAR), 27 VHF Omni-directional ranges (VOR), 15 instrument landing systems (ILS) and 2 twin locator approach systems.

One hundred and twenty-four aerodromes are now equipped with night landing facilities and sixty-eight visual approach slope indicators (VASIS) are now operating comprising sixty-two Australian designed 'T' systems and six Red-White systems.

Six long range surveillance radars are in operation.



## Aircraft on the Australian register

## CIVIL AVIATION: AIRCRAFT ON AUSTRALIAN REGISTER, 30 JUNE 1971

Type of Aircraft	Number of engines				Total aircraft
	One	Two	Three	Four	
Fixed-wing powered aircraft—					
Turbo-jet . . . . .	..	31	12	22	65
Turbo-prop . . . . .	4	83	..	6	93
Piston-engined 20,000 lb and over maximum take-off weight . . . . .	..	54	..	9	63
Piston-engined under 20,000 lb maximum take-off weight . . . . .	2,950	486	5	6	3,447
Helicopters . . . . .	124	2	..	..	126
<b>Total powered aircraft . . . . .</b>	<b>3,078</b>	<b>656</b>	<b>17</b>	<b>43</b>	<b>3,794</b>
Gliders . . . . .	..	..	..	..	292

Particulars of powered aircraft according to manufacturer and air navigation class in which registered, and further details of gliders, may be found in the bulletin *Transport and Communication*, No. 62, 1970-71.

## Civil aviation registrations, licences, etc., in force in Australia

At 30 June 1971 there were 3,794 aircraft registered in Australia. There were also, at 30 June 1971, 28,089 pilots' licences in force of which 12,043 were private pilots' licences, 3,835 commercial pilots' licences, and 10,317 student pilots' licences. Flight radio-telephone operators' licences numbered 18,824. The number of aerodromes in Australia at 30 June 1971 totalled 472 of which 103 were government and 369 licensed, i.e. under the control of a municipality, shire, station owner, etc.

## Accidents and casualties

CIVIL AVIATION: ACCIDENTS INVOLVING CASUALTIES<sup>(a)</sup>  
AUSTRALIA<sup>(b)</sup>, 1966-67 TO 1970-71

	1966-67	1967-68	1968-69	1969-70	1970-71
Number . . . . .	38	36	17	47	31
Persons killed . . . . .	66	47	47	49	48
Persons seriously injured . . . . .	24	29	20	41	24

<sup>(a)</sup> Accidents involving civil aircraft which resulted in death or serious injury. Excludes parachutists killed on contact with earth after an uninterrupted fall. <sup>(b)</sup> Excludes accidents outside Australia involving aircraft on the Australian register.

POSTS: INTERNAL AND OVERSEAS TELECOMMUNICATION SERVICES  
RADIOCOMMUNICATION STATIONS

In this division particulars for the Australian Capital Territory are included with those for New South Wales, and the South Australian figures include particulars for the Northern Territory, unless otherwise indicated. The Central Office of the Postmaster-General's Department is located in Melbourne, Victoria.

## Postmaster-General's Department—General

Under the provisions of the *Post and Telegraph Act* 1901-1968 the Postmaster-General's Department is responsible for the control and operation of postal, telegraphic and telephonic services throughout Australia. The Postmaster-General's Department is also responsible for the provision and operation of the transmitters and technical facilities, other than studio equipment, required for broadcasting and television services by the Australian Broadcasting Commission (see pages 379-83), and, in conjunction with the Overseas Telecommunications Commission (see pages 377-9), with whom

there is close co-operation, provides facilities for communication with overseas countries. Subsidiary to its major activities, the Postmaster-General's Department performs a number of important functions for other Commonwealth and State departments including the collection of broadcast and television licence fees, war service and repatriation repayments, the provision of banking facilities on behalf of the Commonwealth Savings Bank, the sale of tax and duty stamps, the collection of land tax and the over-the-counter distribution of a variety of official forms.

### Research

The Postmaster-General's Department maintains its own research facilities as part of the headquarters organisation in Melbourne. The P.M.G. Research Laboratories had an establishment in 1971 of 421 including 147 professional staff, mainly engineers, physicists, chemists and metallurgists. The main responsibilities of the laboratories are to conduct research and development in telecommunications theory and practice, particularly as applying to the Australian region; to appraise new developments in telecommunication equipment, and to design apparatus and systems required for special applications in the telecommunications and mail handling networks in Australia in cases where these needs could not be met from commercial sources.

### Postal facilities

The following table shows the number of post offices, the area in square miles and the number of inhabitants to each post office (including non-official offices), and the number of inhabitants to each 100 square miles in each State and in Australia at 30 June 1971.

POSTAL FACILITIES: RELATION TO AREA AND POPULATION, STATES  
30 JUNE 1971

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
Post offices—							
Official . . . . .	527	336	225	175	163	50	1,476
Non-official . . . . .	1,713	1,423	925	686	430	307	5,484
<b>Total post offices . . . . .</b>	<b>2,240</b>	<b>1,759</b>	<b>1,150</b>	<b>861</b>	<b>593</b>	<b>357</b>	<b>6,960</b>
Square miles of territory per office	139	50	580	1,046	1,646	74	426
Inhabitants per office . . . . .	2,098	1,976	1,573	1,451	1,704	1,090	1,815
Inhabitants per 100 square miles . . . . .	1,514	3,955	271	139	104	1,476	426

### Employment

PERSONS PROVIDING POST OFFICE SERVICES: CENTRAL OFFICE AND STATES  
30 JUNE 1971

	<i>Central Office</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
Official full-time staff (a)—								
Permanent officers . . . . .	2,694	26,452	19,240	11,788	8,582	6,400	2,687	77,843
Temporary and exempt employees . . . . .	283	14,049	9,338	3,321	1,688	2,767	673	32,119
<b>Total . . . . .</b>	<b>2,977</b>	<b>40,501</b>	<b>28,578</b>	<b>15,109</b>	<b>10,270</b>	<b>9,167</b>	<b>3,360</b>	<b>109,962</b>
Other(b)—								
Non-official postmasters and post-mistresses . . . . .	..	1,761	1,396	903	688	430	222	5,400
Other staff at non-official offices . . . . .	..	511	534	305	214	72	34	1,670
Telephone office-keepers . . . . .	..	136	37	247	83	161	7	671
Mail contractors (including persons employed to drive vehicles) . . . . .	..	1,798	899	1,098	257	338	85	4,475
<b>Total . . . . .</b>	<b>..</b>	<b>4,206</b>	<b>2,866</b>	<b>2,553</b>	<b>1,242</b>	<b>1,001</b>	<b>348</b>	<b>12,216</b>
<b>Grand total . . . . .</b>	<b>2,977</b>	<b>44,707</b>	<b>31,444</b>	<b>17,662</b>	<b>11,512</b>	<b>10,168</b>	<b>3,708</b>	<b>122,178</b>

(a) Persons directly under the control of the Department. Excludes 3,193 part-time staff. (b) Persons not directly under the control of the Department. Includes persons employed, either full-time or part-time, under contract or in return for payments appropriate to work performed.

### Financial operations—Postmaster-General's Department

The financial tables which follow allow for the changed accounting arrangements introduced by the Postmaster-General's Department following amendment of the Post and Telegraph Act in 1968.

**Earnings**

The following table shows the earnings of the Postmaster-General's Department as taken from successive Profit and Loss statements.

**POSTMASTER-GENERAL'S DEPARTMENT: EARNINGS, BY SOURCE**  
**AUSTRALIA, 1961-62 TO 1970-71**  
 (\$'000)

Year	Postal service				Telecommunications service					Total
	Postages	Money order and postal order fees	Commission on agency services	Other earnings	Telephone rentals	Telephone calls	Telegrams	Leased telegraph services	Other earnings (a)	
1961-62	87,886	2,366	2,420	1,949	56,008	106,955	9,664	4,283	8,881	280,412
1962-63	91,835	2,501	3,501	2,008	59,913	117,570	9,831	4,844	10,936	302,939
1963-64	97,842	2,638	3,976	2,121	64,422	129,736	10,641	5,172	12,746	329,293
1964-65	103,032	2,722	4,243	2,194	82,175	142,722	11,423	5,847	15,687	370,045
1965-66	107,402	2,771	4,277	2,296	93,856	154,304	11,639	6,144	18,585	401,274
1966-67	110,317	2,919	4,300	2,452	100,823	171,100	11,868	7,018	20,691	431,488
1967-68	127,748	3,178	4,406	2,847	108,293	211,812	14,172	7,478	22,722	502,656
1968-69	142,770	3,400	5,591	3,175	116,974	245,571	14,711	8,145	26,872	567,208
1969-70	149,036	3,505	5,698	3,628	126,669	280,757	15,120	9,253	31,579	625,244
1970-71	171,548	4,246	6,348	3,457	153,658	312,111	17,369	10,880	35,996	715,613

(a) Includes fees for advertisements in telephone directories, proceeds of sales of fixed assets, telephone service connection fees and telex call fees.

**Expenses**

This table shows the operating and maintenance expenses of the Postmaster-General's Department as taken from successive Profit and Loss Statements.

**POSTMASTER-GENERAL'S DEPARTMENT: EXPENSES, BY SOURCE**  
**AUSTRALIA, 1961-62 TO 1970-71**  
 (\$'000)

Year	Postal service				Telecommunications service				Total
	Operating maintenance and general	Carriage of mail	Depreciation, super-annuation, long service leave and interest		Operating and general	Main-tenance of plant	Depreciation, super-annuation, long service leave and interest		
1961-62	63,594	23,978	7,803		55,437	59,086	74,436		284,335
1962-63	65,107	25,304	8,384		57,483	55,318	92,868		304,465
1963-64	69,655	26,682	9,284		62,651	58,290	103,325		329,887
1964-65	75,987	28,710	10,111		69,637	60,269	121,118		365,833
1965-66	84,868	31,143	11,077		74,451	66,489	133,370		401,398
1966-67	95,775	32,395	15,398		83,154	74,063	152,205		452,991
1967-68	107,016	33,114	18,209		92,614	83,645	177,707		512,305
1968-69	106,682	35,678	21,277		101,861	95,022	198,651		559,171
1969-70	123,615	34,911	23,208		116,920	105,711	218,897		623,262
1970-71	144,352	37,722	29,014		135,321	121,731	249,116		717,256



**Profit or Loss**

The following table shows the net results of the Department's operations for the year 1970-71 together with summarised particulars for the year 1969-70.

**POSTMASTER-GENERAL'S DEPARTMENT:**  
**CONSOLIDATED STATEMENT OF PROFIT AND LOSS, AUSTRALIA, 1969-70 AND 1970-71**  
 (\$'000)

	1969-70	1970-71		
	<i>All services</i>	<i>Postal service</i>	<i>Telecommunications service</i>	<i>All services</i>
Earnings . . . . .	625,244	185,599	530,014	715,613
Expenses—				
Operating, maintenance and general . . . . .	381,157	182,074	257,052	439,126
Depreciation . . . . .	113,569	4,314	123,475	127,789
Superannuation . . . . .	21,631	10,011	16,844	26,855
Long service leave . . . . .	7,984	3,417	5,706	9,123
<i>Total expenses . . . . .</i>	<i>524,341</i>	<i>199,816</i>	<i>403,077</i>	<i>602,893</i>
Profit or loss before interest . . . . .	100,903	—14,217	126,937	112,720
Interest . . . . .	98,921	11,272	103,091	114,363
Profit or loss after interest . . . . .	<b>1,982</b>	<b>—25,489</b>	<b>23,846</b>	<b>—1,643</b>

Minus sign (—) denotes loss.

**Fixed assets, Postmaster-General's Department**

**POSTMASTER-GENERAL'S DEPARTMENT: TRANSACTIONS AFFECTING FIXED ASSETS**  
**1970-71**  
 (\$'000)

<i>Class of plant</i>	<i>Value at 1 July 1970</i>	<i>Adjustments to values</i>	<i>Additions during year</i>	<i>Instalments of plant written out</i>	<i>Value at 30 June 1971</i>
Telecommunications plant . . . . .	2,428,337	—6,826	300,281	27,164	(a)2,694,627
Postal plant . . . . .	18,884	..	1,667	142	20,408
Engineers' moveable plant . . . . .	47,892	—3,630	5,629	2,655	47,237
Motor vehicles . . . . .	33,291	..	5,969	6,430	32,829
Other plant and equipment . . . . .	44,517	195	5,556	1,735	48,534
Buildings . . . . .	280,121	..	44,837	..	(b)324,958
Land . . . . .	28,778	..	4,009	122	32,665
<i>Total . . . . .</i>	<i>2,881,821</i>	<i>—10,261</i>	<i>367,947</i>	<i>38,248</i>	<i>3,201,259</i>

(a) Includes plant under construction valued at \$128,612,709. (b) Includes buildings under construction valued at \$29,148,671.

Minus sign (—) denotes a reduction in values of assets.

## Postal services

## Mail delivery network

## MAIL DELIVERY NETWORK(a): STATES, 31 MARCH 1971

State	Postmen's delivery	Roadside delivery	Private boxes	Private and free bags	Poste restante(b)
New South Wales . . . .	1,428,102	79,080	101,361	7,590	25,727
Victoria . . . . .	957,322	56,362	60,377	5,926	13,732
Queensland . . . . .	460,978	46,474	55,575	6,688	11,627
South Australia . . . . .	356,442	2,510	42,146	4,955	9,658
Western Australia . . . . .	259,494	16,231	33,814	2,176	16,130
Tasmania . . . . .	86,091	4,014	11,513	1,715	4,631
<b>Australia . . . . .</b>	<b>3,548,429</b>	<b>204,671</b>	<b>304,786</b>	<b>29,050</b>	<b>81,505</b>

(a) Statistics shown here are from the Mail Delivery Network Survey at 31 March 1971. (b) Delivery of mail at post offices.

## Postal articles handled

The following two tables show the number of postal articles handled by the Australian Post Office, according to their State of origin. Each article is counted once only irrespective of the number of times it may be handled in transit.

POSTAL ARTICLES HANDLED(a): STATES, 1970-71  
(<sup>'000</sup>)

State	News-papers and parcels				Registered articles			
	Letters (b)	parcets (c)	Parcels (d)	articles (e)	Letters (b)	papers and packets (c)	Parcels (d)	Registered articles (e)
Posted for delivery within Australia					Posted for delivery overseas			
New South Wales . . . . .	802,809	135,398	9,928	3,514	56,068	4,770	527	1,121
Victoria . . . . .	640,991	85,800	5,777	2,145	35,295	3,549	334	610
Queensland . . . . .	295,159	34,039	2,864	1,419	11,184	903	63	70
South Australia . . . . .	194,852	17,124	1,770	754	9,675	1,063	85	85
Western Australia . . . . .	158,178	13,719	1,417	718	9,724	878	46	110
Tasmania . . . . .	56,645	8,123	308	306	333	73	4	4
Australia . . . . .	2,148,634	294,203	22,064	8,855	122,280	11,237	1,059	1,999
Received from overseas					Total postal matter dealt with			
New South Wales . . . . .	64,136	9,328	805	1,525	923,013	149,495	11,260	6,159
Victoria . . . . .	50,781	11,297	565	716	727,067	100,646	6,676	3,471
Queensland . . . . .	8,127	2,357	175	36	314,470	37,299	3,103	1,524
South Australia . . . . .	5,871	2,202	104	35	210,398	20,389	1,958	874
Western Australia . . . . .	7,036	2,931	137	65	174,939	17,528	1,600	893
Tasmania . . . . .	937	444	42	4	57,916	8,640	353	313
Australia . . . . .	136,888	28,559	1,827	2,380	2,407,802	333,998	24,950	13,234

(a) Number of distinct articles handled. (b) Includes letters, cards and other postal articles enclosed in envelopes and sorted with letters. (c) Includes newspapers and postal articles not included in letter mail. (d) Includes registered, cash on delivery and duty parcels. (e) Includes registered articles other than parcels.

POSTAL ARTICLES HANDLED(a): AUSTRALIA, 1966-67 TO 1970-71  
(<sup>'000</sup>)

Year	Letters(b)	Newspapers and packets(c)	Parcels(d)	Registered articles(e)	Total postal articles handled
1966-67	2,232,881	417,980	19,196	13,097	2,683,154
1967-68	2,203,089	411,091	20,783	12,908	2,647,871
1968-69	(f)2,205,525	(f)407,922	22,092	12,748	2,648,287
1969-70	(f)2,326,119	(f)382,545	23,682	13,104	2,745,450
1970-71	(g)2,407,802	(g)333,998	24,950	13,234	2,779,983

(a) Number of distinct articles handled. (b) Includes letters, cards and other postal articles enclosed in envelopes and sorted with letters. (c) Includes newspapers and postal articles not included in letter mail. (d) Includes registered, cash on delivery and duty parcels. (e) Includes registered articles other than parcels. (f) Not comparable with previous years due to revised methods of measuring mail statistics. (g) Comparable only with previous year.

During 1970-71 the cost of the carriage of mails, as disclosed by the Profit and Loss Account of the Postal Service, was as follows: road, \$13,658,251; railway, \$4,702,676; sea, \$692,621; air—internal, \$4,781,096; overseas, \$13,887,556; total, \$37,722,200.

### Money orders and postal orders

The issue of money orders and postal orders is regulated by Sections 74-9 of the *Post and Telegraph Act* 1901-1968. The maximum amount for which a single money order payable within Australia may be obtained is \$200, but additional orders will be issued upon request when larger amounts are to be remitted. The maximum amount permitted to be sent by any one person to a person or persons outside Australia is \$50 a week. A postal order is not available for a sum larger than ten dollars. The following table shows the number and value of money orders and postal orders issued in Australia in each of the years 1966-67 to 1970-71 and the income therefrom which has accrued to the Post Office.

MONEY ORDERS AND POSTAL ORDERS: TRANSACTIONS, AUSTRALIA  
1966-67 TO 1970-71

Year	Money orders(a)			Postal orders		
	Issued		Total commission received	Issued		Fee
	Number	Value		Number	Value	
	<sup>'000</sup>	<sup>\$'000</sup>	<sup>\$'000</sup>	<sup>'000</sup>	<sup>\$'000</sup>	<sup>\$'000</sup>
1966-67	(b)12,594	434,942	2,332	13,499	18,454	629
1967-68	(b)11,373	438,668	2,544	(c)12,364	22,149	657
1968-69	9,672	209,868	2,637	13,525	27,262	772
1969-70	9,153	175,447	2,640	14,866	31,431	861
1970-71	7,353	161,119	3,031	(d)16,732	44,961	1,193

(a) Money orders issued for payment in Australia and overseas. (b) Includes official money orders used in bringing to account telephone accounts and collections on War Service Homes repayments. (c) Postal orders for \$5, \$6, \$7 and \$8 were introduced in October 1967. Until then the highest denomination was \$4. (d) Postal orders for \$9 and \$10 were introduced in October 1970.

Of the total money orders issued in Australia during 1970-71, 6,903,119 valued at \$156,355,238 were payable in Australia, and 449,545 valued at \$4,764,069 were payable overseas. Of the total money orders paid in Australia during 1969-70, 7,133,182 (\$155,609,033) were issued in Australia, and 216,758 (\$4,477,747) were issued overseas.

Of the total postal orders paid in Australia during 1970-71 (16,330,318 valued at \$43,531,979), 11,934,902 (\$34,355,814) were paid in the State in which issued, and 4,395,416 (\$9,176,165) were paid in States other than those in which issued.



### Internal telecommunication services

A review of the development of telegraph services in Australia up to 1921 appeared in Year Book No. 15, page 625, and subsequent developments of importance have been dealt with in later issues. Internal telecommunication operations now comprise telephone, telegraph, and telegraph exchange (telex) services.

#### Wire and pole mileages

At 30 June 1971 there were 24,543,220 single wire miles of cable and 1,047,360 miles of aerial wire used for telecommunication purposes in Australia. The aerial wires are mounted on 103,757 miles of pole towers.

#### Coaxial cable and broadband relay systems

In recent years trunk telephone, telegraph and television channels have been increasingly provided by coaxial cable and radio relay systems. Broadband radio relay systems and coaxial cables are an alternative means of providing transmission facilities, each radio bearer being similar in carrying capacity to a coaxial tube. At 30 June 1971 there were 17,181 tube miles of coaxial cable and 46,877 bearer miles of radio relays in operation.

#### Telephone services in operation

Increasing use of the telephone by the community has resulted in a demand for additional telephone services. The volume of internal telephone traffic has consistently expanded, trunk line calls having the fastest rate of growth.

The following table shows the number of services in operation in each State at 30 June 1971 classified according to type of service, type of exchange to which connected, and location. Telephone services connected to exchanges located within fifteen miles of the Sydney and Melbourne and ten miles of the Brisbane, Adelaide, Perth, and Hobart General Post Offices are defined as being within a metropolitan area.

TELEPHONE SERVICES IN OPERATION: STATES, 30 JUNE 1971

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
Type of service—							
Ordinary exchange services . . .	984,246	776,852	311,732	218,113	170,578	71,155	2,532,676
Duplex services . . .	422	..	22	2	174	34	654
Party line services . . .	4,161	1,504	2,785	1,172	1,071	200	10,893
Private branch exchange services . . .	116,173	78,078	28,204	29,075	25,289	5,365	282,184
Public telephones . . .	11,717	7,610	4,794	2,968	2,446	1,068	30,603
Connected to—							
Automatic exchanges . . .	1,028,395	805,875	295,488	227,835	184,349	72,132	2,614,074
Manual exchanges . . .	88,324	58,169	52,049	23,495	15,209	5,690	242,936
Located in—							
Metropolitan areas . . .	689,868	572,047	165,817	161,479	136,810	28,851	1,754,872
Country areas . . .	426,851	291,997	181,720	89,851	62,748	48,971	1,102,138
Total . . .	1,116,719	864,044	347,537	251,330	199,558	77,822	2,857,010

TELEPHONE SERVICES IN OPERATION: AUSTRALIA, 1967 TO 1971

Services connected to—	30 June—				
	1967	1968	1969	1970	1971
Metropolitan exchanges—					
Automatic . . .	1,383,475	1,456,179	1,548,479	1,663,849	1,754,872
Country exchanges—					
Automatic . . .	523,697	594,977	681,668	778,651	859,202
Manual . . .	327,531	307,681	281,084	261,168	242,936
All exchanges—					
Automatic . . .	1,907,172	2,051,156	2,230,147	2,442,500	2,614,074
Manual . . .	327,531	307,681	281,084	261,168	242,936
Total services . . .	2,234,703	2,358,837	2,511,231	2,703,668	2,857,010

## Telephone instruments

**TELEPHONE INSTRUMENTS IN SERVICE: STATES, 1967 TO 1971**  
(<sup>'000</sup>)

30 June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1967 . . . .	1,276	958	377	287	191	89	3,178
1968 . . . .	1,371	1,020	398	302	208	93	3,392
1969 . . . .	1,444	1,080	423	321	232	98	3,599
1970 . . . .	1,575	1,182	452	344	256	104	3,913
1971 . . . .	1,683	1,240	475	360	285	114	4,157
Number at 30 June 1971 per 100 population .	35.5	35.5	26.0	28.6	27.8	29.3	32.7

## Internal telephone traffic

**LOCAL AND TRUNK LINE TELEPHONE CALLS: AUSTRALIA**  
1966-67 TO 1970-71

Year	Effective paid local calls		Trunk line calls		Total calls <sup>'000</sup>
	Total <sup>'000</sup>	Per service number	Total <sup>'000</sup>	Per service number	
1966-67 . .	2,179,000	1,001	134,200	62	2,313,200
1967-68 . .	2,295,000	999	151,400	66	2,446,400
1968-69 . .	2,442,000	1,004	172,200	71	2,614,200
1969-70 . .	2,662,000	1,021	198,400	76	2,860,400
1970-71 . .	2,848,000	1,024	225,300	81	3,073,300

Subscriber trunk dialling (S.T.D.) facilities were introduced during the year 1961-62 from Canberra to the Sydney network and from Warragul (Victoria) to Melbourne. At the end of June 1971 subscriber trunk dialling was in operation at 1,214 exchanges, connected to approximately 2,260,507 services.

## Internal telegraph traffic

Telegrams can be lodged at any post office, telephone office or from any public telephone equipped for multi-coin operation. In addition, telegrams can be despatched from any subscriber's telephone or telegraph exchange (telex) equipment. The number of telegrams of various types transmitted within the Commonwealth during the years 1966-67 to 1970-71 is set out below.

**INTERNAL TELEGRAPH TRAFFIC: AUSTRALIA, 1966-67 TO 1970-71**  
(<sup>'000</sup>)

Year	Ordinary (a)	Urgent	Press	Letter- grams	Meteoro- logical service	Service	Total telegrams
1966-67 . . .	19,019	494	78	47	1,014	719	21,372
1967-68 . . .	18,723	440	68	38	1,060	719	21,047
1968-69 . . .	18,543	440	68	33	1,068	718	20,869
1969-70 . . .	18,217	454	63	32	1,040	754	20,560
1970-71 . . .	16,265	436	63	23	1,099	765	18,551

(a) Includes radiograms.

**Telex network**

Particulars of the operations of the telex network, which are additional to the telegraph traffic shown above, are as follows:

**TELEX NETWORK SERVICES AND INTERNAL  
CALLS, AUSTRALIA, 1966-67 TO 1970-71**

<i>Year</i>	<i>Services at end of year</i>	<i>Internal calls during year</i>
1966-67 . . .	3,154	6,336,464
1967-68 . . .	4,054	8,377,816
1968-69 . . .	5,067	9,977,018
1969-70 . . .	6,430	12,092,737
1970-71 . . .	7,988	14,246,157

**Overseas telecommunication services**

The Overseas Telecommunications Commission (Australia) is the authority responsible for the establishment, maintenance and operation of telecommunication services between Australia and other countries, with ships at sea and to and between Australia's external Territories.

The Commission was established under the *Overseas Telecommunications Act* 1946. This Act implemented, in Australia, a recommendation of the 1945 Commonwealth Telecommunications Conference for national ownership of the external telecommunications services of the British Commonwealth countries concerned. (Details of overseas communication systems operating in Australia prior to 1946 and developments leading to the establishment of the Commission were published in Year Book No. 37, pages 220-4.)

At the 1966 Commonwealth Telecommunications Conference the British Commonwealth countries completed a review of the machinery for their collaborative arrangements in telecommunications. Following adoption of the recommendations of the 1966 Conference by the representative Governments the Commonwealth Telegraphs Agreements of 1948 and 1963, under which the earlier collaborative financial arrangements had been established, were formally terminated on 31 March 1969. The new Commonwealth Telecommunications Organisation became fully operative from 1 April 1969 when the Commonwealth Telecommunications Organisation Financial Agreement entered into force.

The Commonwealth Telecommunications Organisation, the purpose of which is to promote the efficient exploitation and development of the Commonwealth external telecommunications system, is a three-tier structure comprising the Commonwealth Conference on Telecommunications, the Commonwealth Telecommunications Council and the Commonwealth Telecommunications Bureau. The Commonwealth Telecommunications Council is the continuing management body of the Organisation with the role of promoting the purpose of the Organisation and carrying out the policies agreed by Governments. The Commonwealth Telecommunications Bureau is the Secretariat for the Organisation and functions under the control and direction of the Council.

In association with the Post Office within Australia and with communication carriers in other Commonwealth and foreign countries the Commission provides public message telegram, telephone, telex, phototelegram and leased circuit services to most countries and places throughout the world. International television programmes are provided by means of satellite communication facilities with countries operating earth stations, while the switched data service is available to a number of countries.

To meet Australia's increasing demand for overseas communication channels, and because of limitations to performance and capacity inherent in telegraph cables and high frequency radio systems, the Commission, in partnership with the overseas telecommunications authorities of Britain, Canada and New Zealand, installed a large capacity telephone cable across the Pacific Ocean, connecting Australia, New Zealand and Canada via Suva and Honolulu. The cable (COMPAC) was opened in December 1963 and forms part of a British Commonwealth large capacity cable scheme, in which a complementary cable between Britain and Canada (CANTAT) was officially opened in December 1961. The two cable connections are linked across Canada by a microwave system. The Commonwealth cable system feeds into the United States of America network at Hawaii and into the European network at London.

The south-east Asia cable project (SEACOM), extending the large capacity telephone cable system from Sydney to Singapore and Kuala Lumpur via Cairns, Madang, Guam, Hong Kong, and Kote Kinabalu, was opened for service on 30 March 1967.

The Commonwealth Cable Management Committee, comprising representatives of Britain, Canada, Australia, New Zealand, Malaysia and Singapore, administers COMPAC and SEACOM.



In August 1964, Australia became a foundation member of INTELSAT, a partnership of nations concerned in establishing a global communications, satellite system. Australia has an ownership share (2.4 per cent) making it the sixth largest contributor among the 83 INTELSAT member countries, and it is represented by the O.T.C. Commission. Australia is one of the 18 representatives on the Interim Communications Satellite Committee (ICSC), which is the management body of INTELSAT.

The Agreements under which the INTELSAT Consortium has operated in the period since 1964 were interim in nature, providing for the negotiation of permanent arrangements for the consortium after experience had been gained during the initial period. Negotiations of the permanent Agreements for INTELSAT commenced in Washington DC in 1969 and were successfully concluded in May 1971 at a Plenipotentiary Conference attended by some 92 countries.

The permanent arrangements for INTELSAT are embodied in two inter-related Agreements. The first is an inter-Governmental Agreement which outlines the principles and objectives of the consortium and defines the basic organisational arrangements. The second, the Operating Agreement, provides the basis for the operation and management of the INTELSAT system and may be signed by Governments or telecommunications entities designated by Governments. The new Agreements opened for signature in Washington on 20 August 1971, and were signed on that date by the Australian Government and the O.T.C. Commission, as the designated Australian national communications authority.

In March, 1968, a satellite earth station at Moree, New South Wales, owned and operated by the Commission, commenced commercial communications, including a capability for television transmission/reception. This station, which operates to the Pacific Ocean INTELSAT IV satellite positioned in a stationary orbit 22,300 miles above the equator, was the first in Australia constructed as a 'standard' station of the INTELSAT network, and carries direct circuits between Australia and other countries in the Pacific region. The link with Japan, the first by satellite from Australia to an Asian country, was established for commercial operation on 14 March, 1969.

The completion of the new standard earth stations at Carnarvon (Western Australia) and Ceduna (South Australia) in 1969 and a significant expansion of facilities at the earth station at Moree (N.S.W.) provided increased telecommunication services via satellite.

The original non-standard station in Carnarvon (opened in 1967) is now used solely for telemetry, tracking and command (T.T. & C.) functions under contract with the INTELSAT organisation. The T.T. & C. function provides for four such stations to be spaced around the world so that any INTELSAT satellite can be viewed and controlled no matter where it may be. These stations keep a continuous check of the position of each satellite and its functioning by means of signals transmitted by the satellite. When required, signals are transmitted to a satellite to control the direction of its antenna and to change its orbital position. During launches, these stations transmit the commands which fire the satellite motor to place it in final orbit. The Interim Communications Satellite Committee selected the Carnarvon station for this purpose after calling competitive tenders from earth station owners in the coverage zone of the Indian Ocean and Pacific Ocean satellites.

The second Carnarvon station, operating via the Pacific Ocean INTELSAT IV satellite, provides a link for the National Aeronautics and Space Administration (NASA) between its Carnarvon space tracking stations and the United States. The earth station at Ceduna, operated through the Indian Ocean INTELSAT III satellite, offers services to earth stations in the United Kingdom, Indonesia, India and other countries in the coverage area of the Indian Ocean satellite.

#### International telecommunication traffic

Particulars of the volume of international telegraph services, originating and terminating in Australia, during the years ended 31 March 1970 and 1971 are shown in the following table.

INTERNATIONAL TELEGRAPH SERVICES: AUSTRALIA, YEARS ENDED  
31 MARCH 1970 AND 1971  
(<sup>'000 words</sup>)

Class of traffic	Words transmitted					
	From Australia		To Australia		Total	
	1969-70	1970-71	1969-70	1970-71	1969-70	1970-71
Letter . . .	30,137	30,205	26,492	26,553	56,629	56,758
Ordinary . . .	27,433	28,841	25,541	26,851	52,973	55,692
Press . . .	3,149	3,786	3,630	4,315	6,779	8,102
Greetings . . .	1,749	1,607	1,884	1,731	3,632	3,338
Urgent . . .	1,718	1,891	1,399	1,540	3,117	3,431
Other . . .	729	574	2,153	1,697	2,882	2,271
<b>Total . . .</b>	<b>64,914</b>	<b>66,905</b>	<b>61,099</b>	<b>62,687</b>	<b>126,013</b>	<b>129,592</b>

The following table shows particulars of overseas telecommunication traffic other than telegraphic between Australia and overseas countries for the years ended 31 March 1970 and 1971.

**INTERNATIONAL TELECOMMUNICATION SERVICES OTHER THAN TELEGRAPHIC  
SERVICES: AUSTRALIA, YEARS ENDED 31 MARCH 1970 AND 1971**

Service	Transmissions					
	From Australia		To Australia		Total	
	1969-70	1970-71	1969-70	1970-71	1969-70	1970-71
Telephone . . . paid minutes	4,310,962	5,754,134	4,900,644	6,369,815	9,211,606	12,123,949
Telex . . . . . paid minutes	2,476,404	3,608,420	2,371,303	3,301,077	4,847,707	6,909,497
Television programmes . . . paid minutes	1,326	1,952	2,268	2,580	3,594	4,532
Leased services . . . . . paid hours	870,664	922,707	314,712	237,694	1,185,376	1,160,401
Phototelegrams . . . . . pictures	1,260	1,759	4,521	2,760	5,781	4,519

### Coastal stations

The Overseas Telecommunications Commission operates fourteen coastal radio stations at points around the Australian coast, three on the Papua New Guinea coast and one at Norfolk Island. During the year ended 31 March 1971 the coastal radio service handled 6,532,744 paid words to ships and 4,036,212 words from ships. Ship calls over the radiotelephone service extended over 129,355 paid minutes.

### Radiocommunication stations authorised

At 30 June 1971 there were 150,797 civil radiocommunication stations authorised for operation in the Commonwealth and its Territories. Of these, 6,006 were stations established at fixed locations, 12,225 were land stations which were established at fixed locations for communication with mobile stations, 126,094 were mobile stations and 6,472 amateur stations. Particulars of broadcasting stations and broadcast listeners' licences are shown on pages 380 and 382 respectively.

## BROADCASTING AND TELEVISION

Broadcasting and television services in Australia operate under the *Broadcasting and Television Act 1942-1971* and comprise the National Broadcasting Service, the National Television Service, the Commercial Broadcasting Service, and the Commercial Television Service. General control of these services is a function of the Australian Broadcasting Control Board. Licence fees for commercial broadcasting and television stations are payable under the *Broadcasting Stations Licence Fees Act 1964-1966* and the *Television Stations Licence Fees Act 1964-1966* respectively.

Particulars of the composition, functions and responsibilities of the Australian Broadcasting Control Board are shown in Year Book No. 51, pages 594-5. The functions of the Board as shown therein were subsequently amended by repealing the Board's power to regulate the establishment and operation of networks. Pursuant to the *Broadcasting and Television Act 1942-1971*, the Australian Broadcasting Commission now consists of nine members, one of whom shall be a woman.

### Broadcasting services

#### The National Broadcasting Service

In sound broadcasting the programmes of the National Broadcasting Service are provided by the Australian Broadcasting Commission through transmitters operated by the Postmaster-General's Department.

*Technical facilities.* At 30 June 1971 the National Broadcasting Service comprised seventy-nine transmitting stations, of which seventy-three were medium frequency and six high frequency.

The medium-frequency transmitters operate in the broadcast band 530 to 1,590 kilohertz. The high-frequency stations, using frequencies within the band of three to thirty megahertz, provide services to listeners in sparsely populated parts of Australia such as the north-west of Western Australia, the Northern Territory, and northern and central Queensland.

Many of the programmes provided by country stations are relayed from the capital cities, high-quality programme transmission lines being used for the purpose. A number of programme channels are utilised to link national broadcasting stations in the capital cities of Australia, and, when necessary, this system is extended to connect both the national and commercial broadcasting stations.

At 30 June 1971 sixty-one of the Australian medium-frequency stations were situated outside the six State capital cities.

*Programme facilities.* The programmes of the Australian Broadcasting Commission cover a wide range of activities. The proportion of broadcasting time allocated to the various types of programme during 1970-71 was as follows: classical music, 25.7 per cent; entertainment, 28.4 per cent; news, 9.2 per cent; sporting, 5.6 per cent; light music, 2.5 per cent; spoken word, 7.6 per cent; drama and features, 4.0 per cent; education, 3.4 per cent; Parliament, 3.9 per cent; religious, 2.9 per cent; young people's programmes, 1.5 per cent; rural, 2.2 per cent; and presentation, 2.3 per cent. Further particulars of the operations of the Australian Broadcasting Commission in respect of music, drama and features, youth education, talks, rural broadcasts, news, and other activities are shown in Year Book No. 51, pages 596-7.

### The Commercial Broadcasting Service

Commercial broadcasting stations are operated under licences granted and renewed by the Postmaster-General after taking into consideration any recommendations which have been made by the Broadcasting Control Board. The initial period of a licence is five years and renewals are granted for a period of one year. The fee payable for a licence is \$50 on the grant of the licence, and thereafter \$50 a year plus an amount ascertained by applying the following rates to 'gross earnings', within the meaning of the *Broadcasting Stations Licence Fees Act 1964-1966*, during the preceding financial year—1 per cent up to \$1,000,000; 2 per cent \$1,000,001 to \$2,000,000; 3 per cent \$2,000,001 to \$4,000,000; and 4 per cent over \$4,000,000.

### Overseas Broadcasting Service

There are seven high-frequency stations at Shepparton and two at Lyndhurst, Victoria, and three repeater stations at Darwin, Northern Territory, which provide the overseas service known as 'Radio Australia'. As in the case of the National Broadcasting Service, these stations are maintained and operated by the Postmaster-General's Department, and their programmes are arranged by the A.B.C. The programmes, which give news and information about Australia presented objectively, as well as entertainment, are directed mainly to south-east Asia and the Pacific. The overseas audience has grown very substantially in recent years, as evidenced by a large and increasing number of letters from listeners abroad.

### Broadcasting stations

#### BROADCASTING STATIONS: STATES AND TERRITORIES, 30 JUNE 1971

Type of station	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
National—									
Medium frequency .	19	5	16	9	14	4	4	2	73
High frequency .	1	2	2	..	1	..	..	..	6
Overseas (high frequency) .	..	9	..	..	..	..	3	..	12
Commercial (medium frequency) .	37	20	26	8	14	8	2	1	116
Total .	57	36	44	17	29	12	9	3	207

Tables showing the call sign, location, frequency, and aerial power of national and commercial broadcasting stations in operation at 30 June 1971 are shown in *Transport and Communication*, Bulletin No. 62.



## Television services

### The National Television Service

The National Television Service is provided by the Australian Broadcasting Commission through transmitters operated by the Postmaster-General's Department. The first national station (ABN Sydney) commenced regular transmission on 5 November 1956. At 30 June 1971 forty-eight stations were operating, excluding thirty-six translator stations.

The television programmes provided by the Australian Broadcasting Commission cover a wide range of activities. The proportion of television time allocated among the A.B.C.'s various departments to 30 June 1971 was as follows: drama, 28.5 per cent; public interest, 12.7 per cent; sporting 10.4 per cent; news, 6.4 per cent; variety and acts, 6.8 per cent; education, 22.7 per cent; musical performances, 0.8 per cent; religious, 1.1 per cent; rural, 0.8 per cent; special arts and aesthetics, 4.0 per cent; presentation, 5.9 per cent. The average weekly transmission time for the forty-eight national television transmitters was eighty-five hours during the year ended 30 June 1971.

### The Commercial Television Service

Commercial television stations are operated under licences granted and renewed by the Postmaster-General. The first commercial station (TCN Sydney) commenced regular transmission on 16 September 1956. At 30 June 1971 forty-six television stations were operating.

The initial grant of a licence is for a period of five years and thereafter the licence is renewable annually. The fee payable is \$200 for the first year and thereafter \$200 a year plus an amount ascertained by applying the following rates to 'gross earnings', within the meaning of the *Television Stations Licence Fees Act 1964-1966*, during the preceding financial year—1 per cent up to \$1,000,000; 2 per cent \$1,000,001 to \$2,000,000; 3 per cent \$2,000,001 to \$4,000,000; and 4 per cent over \$4,000,000.

### Colour television

The Government has announced that colour television will be introduced into Australia from 1 March 1975.

### Television stations

During the year ended 30 June 1971 seven new national television stations commenced regular transmissions, namely ABNW Channel 7, Norseman in Western Australia; ABCLQ Channel 7, Cloncurry, ABHQ Channel 9, Hughenden, ABIQ Channel 6, Mount Isa, ABJQ Channel 10, Julia Creek, ABRDQ Channel 6, Richmond in Queensland and ABRS Channel 3, Central East (Loxton), in South Australia. One new commercial television station commenced regular transmission in Western Australia, VEW Channel 8, Kalgoorlie. The following table shows the number of television stations in operation at 30 June 1971.

TELEVISION STATIONS: STATES AND AUSTRALIAN CAPITAL TERRITORY  
30 JUNE 1971

Type of station and location	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Total
National—								
Metropolitan . . .	1	1	1	1	1	1	1	7
Country . . . . .	12	7	12	3	6	1	..	41
<i>Total, National .</i>	<i>13</i>	<i>8</i>	<i>13</i>	<i>4</i>	<i>7</i>	<i>2</i>	<i>1</i>	<i>48</i>
Commercial—								
Metropolitan . . .	3	3	3	3	2	1	1	16
Country . . . . .	11	6	7	2	3	1	..	30
<i>Total, Commercial.</i>	<i>14</i>	<i>9</i>	<i>10</i>	<i>5</i>	<i>5</i>	<i>2</i>	<i>1</i>	<i>46</i>
<b>All stations .</b>	<b>27</b>	<b>17</b>	<b>23</b>	<b>9</b>	<b>12</b>	<b>4</b>	<b>2</b>	<b>94</b>

Tables showing the call sign, location, frequencies, polarisation, aerial power, and weekly hours of transmission of National and Commercial television stations in operation at 30 June 1971 are shown in *Transport and Communication Bulletin*, No. 62.

### Broadcast listeners' and television viewers' licences

Broadcast listeners', television viewers', and combined receiving licences are issued at post offices in accordance with the provisions of the *Broadcasting and Television Act 1942-1971*, which stipulates that, except as prescribed, a person shall not use, maintain or have in his possession a broadcast or television receiver unless there is in force a licence which applies to that receiver. A broadcast listener's licence or a television viewer's licence, whichever is appropriate, authorises the operation of any broadcast receiver or any television receiver, which is: (a) in the possession of the holder of a licence, or of a member of his family, at the address specified in the licence and is ordinarily kept at that address; (b) installed in a vehicle which is ordinarily in the possession of that holder, or a member of his family, and is ordinarily kept at that address when not in use. A person who has both broadcast and television receivers at the one address may take out a combined receiving licence, provision for which was introduced by legislation effective from 1 April 1965.

A licence may be granted free of charge to a blind person over 16 years of age or to a person or authority conducting a school, and at a concession to certain classes of pensioners. Receivers provided for the use of inmates of an approved institution (including a hospital) are covered by an appropriate licence held by the institution. Persons residing in Zone 2 may also be granted a broadcast listener's licence at a reduced rate. Zone 1 is the area within 250 miles of specified broadcasting stations and Zone 2 is the remainder of Australia.

Each broadcast or television receiver let out on hire (except under a hire purchase agreement) must be covered by a hirer's licence held by the person or firm from whom the receiver is hired. The keeper of a lodging-house (which includes a hotel, motel, boarding-house, or any other premises where lodging or sleeping accommodation is provided for reward) must take out a lodging-house licence for each broadcast or television receiver provided by the proprietor in any room or part of the lodging-house occupied or available for occupation by lodgers.

The fees payable for the various classes of licence at 1 October 1971 were as follows.

#### BROADCAST LISTENERS' AND TELEVISION VIEWERS' LICENCES RATES

Licence		Ordinary rate	Pensioner rate
		\$	\$
Broadcast listener's licence and hirer's licence for a broadcast receiver . . . . .	Zone 1	8.00	1.00
	Zone 2	4.25	0.70
Lodging-house licence for a broadcast receiver . . . . .	Zone 1	8.00	..
	Zone 2	4.25	..
Television viewer's licence and hirer's licence for a television receiver . . . . .		19.00	3.00
Lodging house licence for a television receiver . . . . .		19.00	..
Combined receiving licence . . . . .		26.50	4.00

#### Numbers of broadcast listeners' and television viewers' licences

##### BROADCAST LISTENERS' LICENCES IN FORCE(a): STATES, 1967 TO 1971

30 June—	N.S.W.(b)	Vic.	Qld	S.A.(c)	W.A.	Tas.	Aust.
1967 . . . . .	950,788	712,813	340,477	278,069	173,571	82,322	2,538,040
1968 . . . . .	934,877	724,711	371,637	290,051	181,356	77,228	2,579,860
1969 . . . . .	952,634	728,647	382,869	297,877	189,633	78,552	2,630,212
1970 . . . . .	960,223	747,508	384,951	302,519	196,679	78,513	2,670,393
1971 . . . . .	959,036	754,762	394,669	310,485	200,570	79,417	2,698,939

(a) Includes short-term hirers' licences and combined broadcast listeners' and television viewers' licences. (b) Includes Australian Capital Territory. (c) Includes Northern Territory.

## TELEVISION VIEWERS' LICENCES IN FORCE(a): STATES, 1967 TO 1971

30 June—	N.S.W.(b)	Vic.	Qld	S.A.(c)	W.A.	Tas.	Aust.
1967 . . .	927,038	690,857	302,575	254,504	159,048	71,113	2,405,135
1968 . . .	948,153	726,518	335,913	268,595	165,632	74,581	2,519,392
1969 . . .	993,145	747,080	367,289	280,420	183,307	78,216	2,649,457
1970 . . .	1,031,739	782,819	372,609	292,359	197,692	80,756	2,757,974
1971 . . .	1,042,724	806,077	399,947	303,252	209,882	83,286	2,845,168

(a) Includes short-term hirers' licences and combined broadcast listeners' and television viewers' licences. (b) Includes Australian Capital Territory. (c) Includes Northern Territory.

The numbers of combined receiving licences included in both of the foregoing tables as at 30 June 1971 are: New South Wales, 848,342; Victoria, 690,464; Queensland, 318,001; South Australia, 241,384; Western Australia, 168,132; Tasmania, 70,534; Australia, 2,336,857.

Short-term hirers' licences (included above) at 30 June 1971 were: New South Wales, 105,736; Victoria, 41,732; Queensland, 43,421; South Australia, 46,264; Western Australia, 26,524; Tasmania, 5,765; Australia, 269,442.

## Revenue received from broadcast and television licence fees

The following table shows the revenue received from broadcast listeners' licence fees, television viewers' licence fees and from fees for combined licences during the years 1966-67 to 1970-71.

REVENUE RECEIVED FROM BROADCAST AND TELEVISION LICENCE FEES  
STATES, 1966-67 TO 1970-71  
(\$'000)

Year	N.S.W.(a)	Vic.	Qld	S.A.(b)	W.A.	Tas.	Aust.
1966-67 . . .	14,244	10,840	4,951	4,101	2,571	1,127	37,835
1967-68 . . .	14,554	11,265	5,321	4,219	2,666	1,157	39,182
1968-69 . . .	16,700	12,747	6,306	4,930	3,127	1,314	45,125
1969-70 . . .	17,782	13,795	6,694	5,238	3,483	1,397	48,389
1970-71 . . .	17,912	14,023	6,921	5,586	3,689	1,429	49,562

(a) Includes Australian Capital Territory. (b) Includes Northern Territory in respect of broadcast licence fees.

## TRAVEL

An article outlining the history and growth of travel and the structure of tourist organisations in Australia, prepared by the Australian National Travel Association, appeared in Year Book No. 52, pages 1158-84. The following pages contain statistics of travel to and from Australia, together with some descriptive matter. Current statistics on overseas travel are published in monthly and quarterly mimeographed statements *Overseas Arrivals and Departures*.

## Overseas travel

Statistics about travellers to and from Australia are classified in the first instance by the actual or intended length of stay in Australia or in a country abroad; this classification distinguishes between permanent and temporary movement.

Statistics of permanent arrivals (immigrants) and permanent departures (emigrants) are shown in Chapter 7—Population.

## Traveller statistics (overseas visitors and Australian residents)

Statistics of temporary arrivals and departures which are in the nature of travel statistics are included in this chapter. They comprise two main categories.

- (i) *Short term.* Those who intend to stay or have stayed in Australia (overseas visitors) or in a country overseas (Australian residents) for less than a year.
- (ii) *Long term.* Those who intend to stay or have stayed in Australia (overseas visitors) or in a country overseas (Australian residents) for a year or more, but not permanently.



*Short-term* movement includes Australian troops, regardless of their length of stay abroad, and Australian residents who may be away for more than a year but whose actual or intended stay in any one country is less than a year. It excludes persons who arrive in and depart from Australia on the same ship's voyage or on the same flight (variously called direct transit or 'through' passengers), passengers on short pleasure cruises in the south-west Pacific commencing and finishing in Australia, and all crew. However, it includes persons who, on arrival, declare the purpose of their visit to Australia to be 'in transit', if a change of ship or flight takes place. Short-term visitors are more numerous than long-term visitors and have come to be regarded as 'tourists' by many users of the statistics.

During the period October 1967 to December 1971, 276,885 United States troops came to Australia on rest and recreation leave. The last of them completed their leave in January 1972. For statistical purposes they were classified as short-term visitors travelling by air for holiday purposes and their country of residence and country of embarkation or disembarkation were shown as 'Asia—other'.

#### TRAVELLER STATISTICS—SUMMARY, AUSTRALIA 1967 TO 1971

Year	Overseas Visitors				Australian Residents			
	Short-term		Long-term		Short-term		Long-term	
	Arriving in Australia	Departing from Australia	Arriving in Australia	Departing from Australia	Departing from Australia	Returning to Australia	Departing from Australia	Returning to Australia
1967 . . .	221,821	231,762	21,637	12,801	217,746	223,038	52,148	35,655
1968 . . .	299,889	311,181	23,473	12,617	251,880	252,773	51,386	36,387
1969 . . .	361,277	372,747	26,867	15,602	288,805	288,990	59,027	38,308
1970 . . .	416,128	431,039	31,194	18,727	352,526	351,929	64,215	42,099
1971 . . .	432,393	450,022	30,500	21,433	413,917	412,598	67,699	47,782

In addition to the basic classification of travellers shown above, certain other characteristics are ascertained. These characteristics are as follows.

- For all travellers: sex, age, marital status, nationality, country of birth, occupation, intended and actual length of stay, purpose of journey and mode of transport.
- For arrivals: country of last residence, country of embarkation, State of intended residence and State of disembarkation.
- For departures: country of intended residence, country of disembarkation, State of residence in Australia and State of embarkation.

The categories shown in the previous table are cross-classified by the characteristics listed above and the resulting statistics are shown in considerable detail in the quarterly bulletin *Overseas Arrivals and Departures* (4.1) and in the annual bulletin *Demography* (4.9). Certain unpublished information is available on request. Selected traveller statistics are shown in the following tables.

#### OVERSEAS VISITORS ARRIVING AND AUSTRALIAN RESIDENTS DEPARTING TEMPORARILY BY MARITAL STATUS, AGE AND SEX: AUSTRALIA, 1971

Characteristics	Short-term			Long-term		
	Males	Females	Persons	Males	Females	Persons
OVERSEAS VISITORS ARRIVING						
Marital status						
Never married . . .	103,761	53,742	157,503	11,649	7,373	19,022
Married . . .	156,213	90,869	247,082	5,797	4,354	10,151
Widowed or divorced . . .	8,701	19,107	27,808	443	884	1,327
Age (years)						
0-14 . . .	17,190	16,529	33,719	2,251	2,082	4,333
15-24 . . .	60,448	25,930	86,378	8,291	5,502	13,793
25-44 . . .	103,612	47,431	151,043	5,779	3,223	9,002
45-64 . . .	69,445	54,689	124,134	1,229	1,269	2,498
65 and over . . .	17,980	19,139	37,119	339	535	874
Total . . .	268,675	163,718	432,393	17,889	12,611	30,500

OVERSEAS VISITORS ARRIVING AND AUSTRALIAN RESIDENTS DEPARTING  
TEMPORARILY BY MARITAL STATUS, AGE AND SEX: AUSTRALIA, 1971—*continued*

Characteristics	Short-term			Long-term		
	Males	Females	Persons	Males	Females	Persons
AUSTRALIAN RESIDENTS DEPARTING TEMPORARILY						
Marital status—						
Never married . . . .	80,250	63,526	143,776	19,900	18,704	38,604
Married . . . . .	146,541	98,150	244,691	13,271	13,933	27,204
Widowed or divorced . .	6,480	18,970	25,450	563	1,328	1,891
Age (years)—						
0-14 . . . . .	21,279	20,599	41,878	7,866	7,521	15,387
15-24 . . . . .	39,193	35,168	74,361	8,298	12,223	20,521
25-44 . . . . .	95,130	52,730	147,860	13,986	10,756	24,742
45-64 . . . . .	64,949	56,782	121,731	2,973	2,735	5,708
65 and over . . . . .	12,720	15,367	28,087	611	730	1,341
Total . . . . .	233,271	180,646	413,917	33,734	33,965	67,699

The following tables show country of residence of visitors arriving (i.e. in which they last stayed for one year or more); and country of disembarkation of Australian residents departing. No information is available as to the country in which Australian residents going abroad in the short-term classification intend to spend most time.

OVERSEAS VISITORS ARRIVING, BY COUNTRY OF RESIDENCE(a)  
AND MODE OF TRANSPORT: AUSTRALIA, 1971

Country of residence(a)	Short-term			Long-term		
	By sea	By air	Total	By sea	By air	Total
Africa—						
Commonwealth countries . . . .	284	2,102	2,386	31	188	219
South Africa . . . . .	938	3,904	4,842	304	172	476
Other . . . . .	23	1,195	1,218	6	136	142
America—						
Canada . . . . .	1,125	11,390	12,515	480	1,265	1,745
Other Commonwealth countries . .	32	626	658	10	37	47
United States of America . . . .	1,714	81,569	83,283	224	4,307	4,531
Other . . . . .	43	2,809	2,852	6	260	266
Asia—						
Ceylon, India and Pakistan . . . .	29	3,124	3,153	5	455	460
Hong Kong . . . . .	299	6,496	6,795	12	213	225
Malaysia and Singapore . . . . .	366	12,321	12,687	48	1,985	2,033
Other Commonwealth countries . .	8	372	380	2	46	48
Japan . . . . .	429	15,613	16,042	19	922	941
Other . . . . .	160	58,852	59,012	25	1,875	1,900
Europe—						
United Kingdom and Ireland . . .	4,958	39,266	44,224	1,146	2,201	3,347
Other Commonwealth countries . .	57	455	512	10	42	52
France . . . . .	123	3,225	3,348	19	159	178
Germany . . . . .	297	6,470	6,767	64	230	294
Greece . . . . .	19	1,225	1,244	16	273	289
Italy . . . . .	206	4,108	4,314	27	308	335
Netherlands . . . . .	510	4,979	5,489	74	154	228
Other . . . . .	360	9,208	9,568	70	1,857	1,927
Oceania—						
Fiji . . . . .	268	4,841	5,109	3	202	205
New Zealand . . . . .	3,280	95,177	98,457	1,517	8,309	9,826
Papua New Guinea . . . . .	964	32,848	33,812	17	490	507
Other Commonwealth countries . .	486	2,539	3,025	21	118	139
Other . . . . .	101	10,600	10,701	6	134	140
Total . . . . .	17,079	415,314	432,393	4,162	26,338	30,500

(a) Country in which the visitor was last resident for a period of one year or more.

**AUSTRALIAN RESIDENTS DEPARTING TEMPORARILY, BY COUNTRY OF  
DISEMBARKATION(a) AND MODE OF TRANSPORT: AUSTRALIA, 1971**

<i>Country of disembarkation(a)</i>	<i>Short-term</i>			<i>Long-term</i>		
	<i>By sea</i>	<i>By air</i>	<i>Total</i>	<i>By sea</i>	<i>By air</i>	<i>Total</i>
<b>Africa—</b>						
Commonwealth countries . . . . .	21	1,255	1,276	9	243	252
South Africa . . . . .	1,090	3,133	4,223	737	788	1,525
Other . . . . .	274	..	274	532	1	533
<b>America—</b>						
Canada . . . . .	927	1,136	2,063	187	281	468
Other Commonwealth countries . . . . .	24	74	98	7	1	8
United States of America—ex- cluding Hawaii . . . . .	1,287	14,690	15,977	493	1,703	2,196
Hawaii . . . . .	93	13,586	13,679	9	1,190	1,199
Other . . . . .	338	956	1,294	308	119	427
<b>Asia—</b>						
Ceylon, India and Pakistan . . . . .	24	2,035	2,059	12	279	291
Hong Kong . . . . .	2,550	21,419	23,969	59	2,892	2,951
Malaysia and Singapore . . . . .	7,168	45,339	52,507	935	9,801	10,736
Other Commonwealth countries . . . . .	25	351	376	81	26	107
Japan . . . . .	7,234	2,545	9,779	118	102	220
Other . . . . .	1,250	31,643	32,893	54	2,729	2,783
<b>Europe—</b>						
United Kingdom and Ireland . . . . .	11,286	14,512	25,798	8,619	2,104	10,723
Other Commonwealth countries . . . . .	369	1,330	1,699	497	46	543
Greece . . . . .	884	9,591	10,475	2,006	4,613	6,619
Italy . . . . .	5,935	14,286	20,221	5,076	1,762	6,838
Netherlands . . . . .	628	4,850	5,478	910	281	1,191
Other . . . . .	1,074	10,107	11,181	940	1,865	2,805
<b>Oceania—</b>						
Fiji . . . . .	488	31,180	31,668	41	1,091	1,132
New Zealand . . . . .	4,793	94,716	99,509	1,290	4,008	5,298
Papua New Guinea . . . . .	464	29,667	30,131	66	7,948	8,014
Other Commonwealth countries . . . . .	332	7,357	7,689	215	187	402
Other . . . . .	395	9,206	9,601	34	404	438
<b>Total . . . . .</b>	<b>48,953</b>	<b>364,964</b>	<b>413,917</b>	<b>23,235</b>	<b>44,464</b>	<b>67,699</b>

(a) Refers to the intended country of disembarkation from the particular ship or aircraft which takes the passenger from Australia.

**OVERSEAS VISITORS ARRIVING AND AUSTRALIAN RESIDENTS DEPARTING TEMPORARILY  
BY STATED PURPOSE OF JOURNEY AND SEX: AUSTRALIA, 1971**

<i>Purpose of journey</i>	<i>Short-term</i>			<i>Long-term</i>		
	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
<b>OVERSEAS VISITORS ARRIVING</b>						
In transit . . . . .	40,475	24,252	64,727	..	..	..
Business . . . . .	59,788	6,401	66,189	2,740	884	3,624
Holiday . . . . .	145,739	120,668	266,407	3,786	3,767	7,553
Education . . . . .	8,178	3,936	12,114	3,014	1,660	4,674
Other and not stated . . . . .	14,495	8,461	22,956	8,349	6,300	14,649
<b>Total . . . . .</b>	<b>268,675</b>	<b>163,718</b>	<b>432,393</b>	<b>17,889</b>	<b>12,611</b>	<b>30,500</b>
<b>AUSTRALIAN RESIDENTS DEPARTING TEMPORARILY</b>						
Business . . . . .	67,842	8,184	76,026	7,119	3,857	10,976
Holiday . . . . .	134,231	163,060	297,291	17,042	19,063	36,105
Education . . . . .	3,935	2,314	6,249	2,150	1,508	3,658
Other and not stated . . . . .	27,263	7,088	34,351	7,423	9,537	16,960
<b>Total . . . . .</b>	<b>233,271</b>	<b>180,646</b>	<b>413,917</b>	<b>33,734</b>	<b>33,965</b>	<b>67,699</b>



## Short-term travel

Information about the countries of residence of short-term visitors, the countries of disembarkation of Australian residents travelling overseas in the short-term, and intended lengths of stay, are of particular interest to the tourist industry.

OVERSEAS VISITORS ARRIVING BY COUNTRY OF RESIDENCE AND INTENDED LENGTH OF STAY  
AND AUSTRALIAN RESIDENTS DEPARTING BY COUNTRY OF DISEMBARKATION AND INTENDED  
LENGTH OF STAY: AUSTRALIA, 1971

Country of residence (visitors) and country of disembarkation (residents)	Overseas visitors arriving—intended length of stay						Australian residents departing—intended length of stay					
	Under 1 week	1 week and under 1 month	1 month and under 3 months	3 months and under 12 months	Indefin- ite, not stated etc.	Total	Under 1 week	1 week and under 1 month	1 month and under 3 months	3 months and under 12 months	Indefin- ite, not stated etc.	Total
<b>Africa—</b>												
Commonwealth countries	728	496	561	401	200	2,386	27	207	466	489	87	1,276
South Africa . . . . .	1,567	1,141	1,175	648	311	4,842	17	569	1,774	1,427	436	4,223
Other . . . . .	421	261	156	172	208	1,218	..	2	11	142	119	274
<b>America—</b>												
Canada	1,858	5,491	2,758	1,563	845	12,515	12	424	851	645	131	2,063
Other Commonwealth countries . . . . .	133	280	130	78	37	658	2	21	35	34	6	98
United States of America— excluding Hawaii	27,960	40,620	8,161	4,196	2,346	83,283	142	4,901	6,347	3,493	1,094	15,977
Hawaii . . . . .	627	4,383	5,699	2,242	728	13,679	2	235	441	440	176	1,294
Other . . . . .	771	1,142	475	257	207	2,852	..	..	..	..	..	..
<b>Asia—</b>												
Ceylon, India, Pakistan . . . . .	844	882	515	539	373	3,153	38	478	760	639	144	2,059
Hong Kong . . . . .	1,735	2,305	1,222	746	787	6,795	1,144	5,393	11,650	4,366	1,416	23,969
Malaysia and Singapore . . . . .	2,830	3,350	2,887	2,318	1,302	12,687	2,743	13,806	17,514	12,374	6,070	52,507
Other Commonwealth countries . . . . .	88	64	149	51	28	380	..	2	18	332	24	376
Japan . . . . .	6,342	6,271	1,533	685	1,211	16,042	87	1,484	7,389	391	428	9,779
Other . . . . .	48,237	5,038	2,724	1,607	1,406	59,012	956	6,889	7,740	5,112	12,196	32,893
<b>Europe—</b>												
United Kingdom and Ireland . . . . .	8,402	11,416	11,290	9,097	4,019	44,224	30	1,665	8,252	13,594	2,257	25,798
Other Commonwealth countries . . . . .	49	92	259	89	23	512	..	5	99	1,451	144	1,699
Greece . . . . .	195	117	150	546	236	1,244	8	238	1,419	7,020	1,790	10,475
Italy . . . . .	1,053	1,025	705	1,036	495	4,314	33	857	4,112	12,012	3,207	20,221
Netherlands . . . . .	1,087	858	1,414	1,408	722	5,489	2	373	3,067	1,758	278	5,478
Other . . . . .	5,679	5,811	3,347	3,046	1,800	19,683	11	543	3,148	6,639	840	11,181
<b>Oceania—</b>												
Fiji . . . . .	1,413	1,435	1,006	846	409	5,109	4,069	23,005	2,240	1,070	1,284	31,668
New Zealand . . . . .	24,297	49,603	10,798	6,753	7,006	98,457	7,840	67,940	13,442	5,933	4,354	99,509
Papua New Guinea . . . . .	5,041	7,562	12,113	8,086	1,010	33,812	3,623	10,918	7,078	5,721	2,791	30,131
Other Commonwealth countries . . . . .	665	783	657	712	208	3,025	669	5,939	495	189	397	7,689
Other . . . . .	2,075	2,998	3,508	989	1,131	10,701	1,022	5,477	1,594	1,067	441	9,601
<b>Total . . . . .</b>	<b>143,470</b>	<b>149,041</b>	<b>67,693</b>	<b>45,869</b>	<b>26,320</b>	<b>432,393</b>	<b>23,104</b>	<b>155,754</b>	<b>105,641</b>	<b>88,580</b>	<b>40,838</b>	<b>413,917</b>

Short-term travel is subject to marked seasonal variation, December being the peak month for the arrival of visitors and the departure of Australian residents.

OVERSEAS VISITORS AND AUSTRALIAN RESIDENTS: ARRIVALS AND DEPARTURES  
BY MONTH OF ARRIVAL OR DEPARTURE AND MODE OF TRANSPORT  
AUSTRALIA, 1971

Month	Overseas visitors						Australian residents					
	Arriving			Departing			Departing			Returning		
	By sea	By air	Total	By sea	By air	Total	By sea	By air	Total	By sea	By air	Total
January . . . . .	1,062	34,575	35,637	2,172	45,864	48,036	3,161	23,211	26,372	3,492	46,532	50,024
February . . . . .	2,004	35,979	37,983	2,171	39,158	41,329	5,424	18,908	24,332	2,711	26,078	28,789
March . . . . .	1,970	35,709	37,679	1,952	38,871	40,823	5,493	26,273	31,766	2,769	23,931	26,700
April . . . . .	1,062	29,455	30,517	1,899	33,677	35,576	4,816	29,154	33,970	2,912	22,047	24,959
May . . . . .	1,245	39,489	40,734	2,565	42,137	44,702	7,764	36,111	43,875	3,603	27,383	30,986
June . . . . .	597	25,118	25,715	969	26,658	27,627	2,351	37,621	39,972	3,895	24,847	28,742
July . . . . .	761	28,178	28,939	1,339	27,956	29,295	3,487	32,152	35,639	2,963	29,420	32,383
August . . . . .	788	33,800	34,588	729	34,258	34,987	1,957	35,311	37,268	2,128	35,933	38,061
September . . . . .	788	29,231	30,019	1,410	32,157	33,567	2,493	23,205	25,698	6,090	36,731	42,821
October . . . . .	1,553	36,613	38,166	1,541	32,836	34,377	4,466	23,169	27,635	3,910	27,760	31,670
November . . . . .	1,812	38,321	40,133	2,467	39,317	41,784	1,999	23,811	25,810	4,867	24,222	29,089
December . . . . .	3,437	48,846	52,283	1,715	36,204	37,919	5,542	56,038	61,580	..	..	..
<b>Total . . . . .</b>	<b>17,079</b>	<b>415,314</b>	<b>432,393</b>	<b>20,929</b>	<b>429,093</b>	<b>450,022</b>	<b>48,953</b>	<b>364,964</b>	<b>413,917</b>	<b>41,738</b>	<b>370,860</b>	<b>412,598</b>

### Long-term travel

Many long-term travellers travel for business or education and intend to follow an occupation in the country visited during their stay in Australia or overseas. This is evident from the statistics shown in the table on page 386 which classify travellers according to the purpose of their journey. Statistics of the occupations of long-term visitors arriving in Australia and Australian residents departing overseas (long-term) are of general interest and are shown in the following table.

#### OVERSEAS VISITORS ARRIVING AND AUSTRALIAN RESIDENTS DEPARTING, BY OCCUPATION AND SEX: AUSTRALIA, 1971

Occupation group	Overseas visitors arriving			Australian residents departing		
	Males	Females	Persons	Males	Females	Persons
Professional, technical, and related workers .	2,648	1,877	4,525	5,146	5,243	10,389
Administrative, executive, and managerial workers . . . . .	1,111	124	1,235	1,614	259	1,873
Clerical workers . . . . .	607	2,113	2,720	2,165	6,195	8,360
Sales workers . . . . .	644	233	877	1,058	607	1,665
Farmers, fishermen, hunters, timber getters, and related workers . . . . .	530	21	551	592	34	626
Miners, quarrymen, and related workers . .	89	..	89	190	..	190
Workers in transport and communication .	635	131	766	988	282	1,270
Craftsmen and production-process workers .	3,162	329	3,491	6,605	1,069	7,674
Labourers(a) . . . . .	940	..	940	4,073	..	4,073
Service (protective and other), sport, and recreation workers . . . . .	1,096	520	1,616	924	1,048	1,972
Occupation inadequately described or not stated . . . . .	1,383	204	1,587	805	233	1,038
Persons not in the labour force—						
Children and students . . . . .	4,723	3,441	8,164	8,935	8,497	17,432
Other . . . . .	321	3,618	3,939	639	10,498	11,137
<b>Total . . . . .</b>	<b>17,889</b>	<b>12,611</b>	<b>30,500</b>	<b>33,734</b>	<b>33,965</b>	<b>67,699</b>

(a) Labourers (so described), not elsewhere classified and freight handlers, including waterside workers.

### Direct transit travellers

As indicated on page 384, all the preceding figures in this section exclude persons who arrive in and depart from Australia on the same ship's journey or on the same flight. Persons thus excluded are not normally considered visitors to Australia. For instance, settlers or other persons going to New Zealand, Papua New Guinea, or other neighbouring countries, or leaving such countries may travel through Australia on their way. On the other hand, all persons visiting Australia on cruise vessels, which may remain in Australian waters for a considerable time, are also treated as direct transit travellers and are thus excluded from the figures shown on previous pages. Information about direct transit passengers on ships calling at Australian ports is given in the next table.

#### OVERSEAS SHIPPING PASSENGERS IN DIRECT TRANSIT(a): AUSTRALIA, 1969 TO 1971

Approximate period from first to last Australian port (days)	1969		1970		1971	
	Passengers	Passenger days	Passengers	Passenger days	Passengers	Passenger days
Less than 3 . . . . .	3,989	6,601	3,942	5,057	3,965	6,316
3 and less than 5 . . . .	4,237	12,990	4,701	14,924	2,429	8,592
5 and less than 7 . . . .	5,960	34,001	6,516	37,445	2,402	14,397
7 and less than 9 . . . .	5,735	43,840	3,745	28,107	7,568	56,586
9 and less than 11 . . . .	4,549	41,376	3,362	30,668	3,964	37,000
11 and less than 22 . . . .	1,341	15,958	2,267	26,304	580	7,765
22 and over . . . . .	109	3,395	161	4,506	35	1,024
<b>Total . . . . .</b>	<b>25,920</b>	<b>158,161</b>	<b>24,694</b>	<b>147,011</b>	<b>20,943</b>	<b>131,680</b>

(a) Persons who arrived in and departed from Australia on the same ship's voyage.

### Sea cruises from Australia

Excluded from the foregoing statistics are passengers on short pleasure cruises in the south-west Pacific, commencing and finishing in Australia on ships not then engaged in regular voyages. The numbers of cruises and cruise passengers during the last three years are shown in the following table.

SHORT PLEASURE CRUISES IN THE SOUTH-WEST PACIFIC  
AUSTRALIA, 1969 TO 1971

Duration of cruise in days(a)	1969		1970		1971	
	Cruises	Passengers	Cruises	Passengers	Cruises	Passengers
Less than 7 . . . . .	2	2,352	3	3,543	2	1,672
7 and less than 10 . . . . .	2	1,000	3	2,993	3	3,443
10 and less than 13 . . . . .	8	8,590	18	18,912	7	6,568
13 and less than 16 . . . . .	23	23,115	12	11,725	31	28,195
16 and less than 19 . . . . .	4	2,685	9	4,514	20	2,542
19 and less than 22 . . . . .	1	652	..	..	2	1,742
22 and over . . . . .	1	409	3	1,897	..	..
<b>Total . . . . .</b>	<b>41</b>	<b>38,803</b>	<b>48</b>	<b>43,584</b>	<b>65</b>	<b>44,162</b>

(a) The duration of a cruise is the period during which the ship is absent from Australia.

### Tourist organisation

The Australian Tourist Commission was established by the Commonwealth Government under the *Australian Tourist Commission Act 1967*. Its objectives are the encouragement of visits to Australia, and travel in Australia by people from other countries. The seven man Commission comprises a chairman appointed by the Commonwealth Government; two appointees to represent private industry, selected by the Commonwealth Government from a panel of names put forward by the Australian National Travel Association; two other voting members, at least one of whom is an officer of the Public Service of the Commonwealth; and two non-voting representatives nominated by the State Governments.

For 1970-71 the Commonwealth Government provided \$2,350,000 to the Commission, to be spent, mainly in overseas countries, on advertising campaigns and in associated promotional activities. The Commission brings to Australia travel agents, writers, photographers and other publicists to see at first hand what the country has to offer visitors. It takes no part in the detailed organisation of tourist activities in Australia but is a member of the Australia and New Zealand Government Tourist Conference and provides the secretariat for the Tourist Ministers' Council. The Minister in Charge of Tourist Activities is a member of the Tourist Ministers' Council together with Ministers in charge of tourism in the six States, the Northern Territory and Papua New Guinea. The Commission has its Head Office in Melbourne and branch offices in London, Frankfurt, New York, Chicago, Los Angeles, Auckland, Tokyo, and Sydney.

The Australian National Travel Association, which is described on pages 1161-2 of the special article Travel and Tourism in Year Book No. 52, was formerly responsible, *inter alia*, for the promotion overseas of Australia as a tourist destination. Since the creation of the Australian Tourist Commission, the Association concentrates on the encouragement of the growth and development of travel and tourism within Australia, and the improvement of the standard and variety of facilities and services provided by private enterprise for the use of both domestic and overseas visitors. It acts as a co-ordinating body for its members, provides a clearing house for information, and conducts surveys into aspects of local tourist activity. The Association is governed by a Board representative of travel and tourist interests on which the Commonwealth Government is no longer represented. The Association's office is located in Sydney.





## CHAPTER 13

### WELFARE SERVICES

This chapter relates to welfare services other than those concerned specifically with education, health and repatriation. The latter are dealt with, in the main, in the relevant chapters of this Year Book. Apart from a summary of government expenditure on welfare services, the chapter is devoted to a description in some detail of the services provided by the Commonwealth. For information on the many important welfare services provided by State and local governments, especially in the fields of child and Aboriginal welfare, reference should be made to the Year Books or Statistical Registers of the States and the annual reports of the State departments concerned. Information on pension and superannuation schemes provided for government and semi-government employees, mine workers, parliamentarians, and employees of private business is included in the chapter Private Finance.

There are numerous welfare services provided by charitable and other non-government institutions and organisations. There are institutions providing shelter and care for needy, aged, infirm or handicapped persons, neglected children, destitute persons, wayward boys and girls, and the like. Many organisations, too, provide aid in kind (food, clothing, etc.), auxiliary medical and nursing services, and other assistance to relieve suffering and hardship. Considerable work is also done by such organisations in the rehabilitation or establishment in the community of various types of people such as prisoners and migrants, and in the prevention and alleviation of cruelty and maltreatment of any sort. A brief description of the activities of such organisations is included at the end of this chapter.

Further information on subjects dealt with in this chapter is included in the annual bulletins *Australian National Accounts* (7.1); *Public Authority Finance: Commonwealth Authorities* (5.12); *Public Authority Finance* (5.33); *Public Authority Finance: State Governments*; *Social Services* (5.37). Current and summarised information on Commonwealth social services is contained in the *Quarterly Summary of Australian Statistics* (1.3) and the *Monthly Review of Business Statistics* (1.4).

#### Commonwealth expenditure on welfare services

This section deals with various government payments for the relief of the aged, indigent, infirm, widowed and unemployed, assistance to families, Aboriginal welfare, etc. For summary statements of cash payments to persons made by public authorities under various functional heads, see *Australian National Accounts* and other annual bulletins mentioned above. Expenditure by State governments on certain welfare services is shown on page 411. Commonwealth expenditure on welfare services is financed through the National Welfare Fund from general or special departmental appropriations, other trust funds, and specific purpose grants to the States. Outlay by Commonwealth Authorities on Aboriginal advancement is shown on page 410. Analyses of Commonwealth expenditure by function and economic type are given in Chapter 18—Public Authority Finance and, in more detail, in the bulletin *Public Authority Finance: Commonwealth Authorities*. The following tables set out details of welfare cash benefits to persons during the year 1970–71 and for the five years 1966–67 to 1970–71.

**COMMONWEALTH AUTHORITIES, WELFARE: CASH BENEFITS TO PERSONS, 1970-71**  
(£'000)

Service, etc.	N.S.W. (a)	Vic.	Qld	S.A. (a)	W.A.	Tas.	N.T. (a)	A.C.T. (a)	Abroad	Total
Age and invalid pensions . . .	269,960	179,578	112,669	64,714	48,979	21,835	1,888	1,999	654	702,276
Child endowment . . .	67,961	55,924	29,199	18,284	16,423	6,686	1,485	2,451	54	198,467
Commonwealth rehabilitation service . . .	1,175	1,012	471	463	386	122	..	..	18	3,646
Funeral benefits . . .	648	440	260	150	107	43	..	5	..	1,653
Maternity allowances . . .	2,981	2,407	1,226	718	743	274	85	118	2	8,554
Tuberculosis campaign—allowances . . .	229	158	131	52	30	32	26	1	..	659
Unemployment benefits, sickness and special benefits . . .	7,923	5,817	4,688	2,408	1,699	764	89	89	..	23,478
Widows' pensions . . .	32,945	24,366	13,698	8,969	6,172	3,327	437	496	104	90,514
Sheltered employment allowances	272	645	244	74	..	..	..	..	..	590
Deserted wives' benefits . . .	909	1,112	645	294	544	188	..	..	..	3,691
Personal care . . .	423	438	288	242	123	76	..	..	..	1,592
Delivered meals . . .	127	110	23	43	29	8	..	1	..	341
Emergency assistance to wool-growers(b) . . .	6,188	1,936	4,683	1,676	6,259	569	..	16	..	21,327
Other(c) . . .	..	..	..	..	..	..	..	..	..	3,673
<b>Total welfare</b> . . .	<b>391,741</b>	<b>273,298</b>	<b>167,981</b>	<b>98,257</b>	<b>81,568</b>	<b>33,924</b>	<b>4,010</b>	<b>5,177</b>	<b>832</b>	<b>1,060,461</b>

(a) State totals for New South Wales and South Australia also include most of the unallocable expenditure on cash benefits to persons resident in the Australian Capital Territory and the Northern Territory respectively. (b) For details see Chapter 22, Rural Industry. (c) Expenditures on this item are unallocable and are included in total only.

**COMMONWEALTH AUTHORITIES, WELFARE: CASH BENEFITS TO PERSONS  
1966-67 TO 1970-71  
(\$'000)**

<i>Service, etc.</i>	1966-67	1967-68	1968-69	1969-70	1970-71
Age and invalid pensions . . . . .	481,840	513,984	558,587	641,982	702,276
Child endowment . . . . .	199,282	187,920	193,263	220,143	198,467
Commonwealth rehabilitation service . . . . .	1,844	1,944	2,260	2,758	3,646
Funeral benefits . . . . .	1,334	1,338	1,571	1,512	1,653
Maternity allowances . . . . .	7,294	7,349	7,960	8,000	8,554
Tuberculosis campaign—allowances . . . . .	1,193	1,091	921	771	659
Unemployment benefits, sickness and special benefits	19,044	18,832	16,830	18,592	23,478
Widows' pensions . . . . .	56,438	61,061	69,080	81,753	90,514
Sheltered employment allowances . . . . .	..	104	288	436	590
Deserted wives' benefits . . . . .	..	201	1,149	1,882	3,691
Personal care . . . . .	..	..	..	1,133	1,592
Delivered meals . . . . .	..	..	..	196	341
Emergency assistance to woolgrowers(a) . . . . .	..	..	..	..	21,327
Other . . . . .	2,076	2,267	3,051	2,938	3,673
<b>Total welfare . . . . .</b>	<b>770,344</b>	<b>796,092</b>	<b>854,960</b>	<b>982,094</b>	<b>1,060,461</b>

(a) For details see Chapter 22, Rural Industry.

### Commonwealth social services

Under the provisions of Section 51 of the Constitution, the Commonwealth Government is empowered to legislate on:

'(xxiii) Invalid and old age pensions:

'(xxiiiA) The provision of maternity allowances, widows' pensions, child endowment, unemployment, pharmaceutical, sickness and hospital benefits, medical and dental services (but not so as to authorize any form of civil conscription), benefits to students and family allowances:'.

The latter paragraph was inserted in the Constitution after being accepted by the electors at a referendum in 1946.

Before 1947, Commonwealth social service benefits were paid under various Acts. On 1 July 1947 with the passage of the *Social Services Consolidation Act 1947*, all Acts providing social service benefits were amalgamated. The Act is at present styled the *Social Services Act 1947-1972*.

#### Reciprocal social services agreements with other countries

*New Zealand.* An agreement between the Governments of Australia and New Zealand for reciprocity in social services came into operation on 3 September 1943 and was amended from 1 July 1949. The reciprocal arrangements cover age and invalid pensions, widows' pensions, child endowment, and unemployment and sickness benefits, and apply to both permanent and temporary changes of residence. Residence in one country may be treated as residence in the other country in relation to entitlement to benefits in which a residential qualification applies. Persons from one country taking up a permanent residence in the other country become eligible for any of the specified benefits of the new country under the same conditions (with one or two exceptions) as apply to citizens of that country. Persons in receipt of any of the specified benefits in one country may continue to receive those benefits while temporarily absent in the other country.

*United Kingdom.* A reciprocal agreement on social services between the United Kingdom and Australia came into operation on 7 January 1954. Amendments became effective from 1 April 1958 and 1 October 1962. Under the current agreement residence in one country may be treated as residence in the other country as the basis for entitlement to benefits in which a residential qualification applies. Australians going to the United Kingdom for permanent residence are treated in the United Kingdom as if they had been insured under the National Insurance Scheme while in Australia, so that they can qualify for various National Insurance benefits. There is also provision for the safeguard of social service rights for persons going from one country to the other for temporary residence.

**Social service benefits provided**

The social service benefits provided by the Commonwealth Government under the *Social Services Act 1947-1972*, and the date on which each came into operation, are:

Age pension . . . . .	1 July 1909
Invalid pension . . . . .	14 October 1910
Allowances for wife and first child of pensioners who are invalided . . . . .	8 July 1943
Allowances for second and subsequent children of pensioners who are invalided . . . . .	11 October 1956
Allowances for wife and children of other age pensioners	14 October 1965
Guardians' allowances for widowed and other unmarried age and invalid pensioners with children in their care	14 October 1965
Special payments to a surviving pensioner . . . . .	10 October 1968
Widows' pensions . . . . .	30 June 1942
Supplementary assistance (age, invalid and widows' pensions) . . . . .	15 October 1958
Supplementary allowance (long-term sickness benefit) . . . . .	28 September 1970
Widows' pensions—allowances for second and sub- sequent children . . . . .	2 October 1956
Funeral benefit . . . . .	1 July 1943
Maternity allowance . . . . .	10 October 1912
Child endowment . . . . .	1 July 1941
Child endowment—student children . . . . .	14 January 1964
Unemployment benefit . . . . .	1 July 1945
Sickness benefit . . . . .	1 July 1945
Sickness benefit (long-term) . . . . .	28 September 1970
Special benefit . . . . .	1 July 1945
Sheltered employment allowance . . . . .	30 June 1967
Commonwealth Rehabilitation Service . . . . .	10 December 1948
Training scheme for widow pensioners . . . . .	27 September 1968

**Age and invalid pensions**

Age pensions are payable to men, sixty-five years of age and over, and women, sixty years of age and over, who have lived in Australia continuously for at least ten years, which need not be immediately prior to the date of claim for a pension. If a person has completed five years, but not ten years, continuous residence, and has lived in Australia for periods which exceed a total of ten years, the period of continuous residence otherwise required is reduced by the total of his periods of residence in Australia in excess of ten years. Any periods of absence during which a person's home remains in Australia, and absences in certain other circumstances, are counted as residence, and any absence in an external Territory of the Commonwealth, while not counting as residence, does not interrupt continuity of residence in Australia. Residence in New Zealand or the United Kingdom may be treated as residence in Australia.

Invalid pensions are payable to persons, sixteen years of age and over, who have lived in Australia for a continuous period of five years (including certain absences) at any time, and who are permanently incapacitated for work to the extent of at least eighty-five per cent, or permanently blind. If the incapacity or blindness first occurred outside Australia, except during a temporary absence, the residence qualification is the same as for an age pension.

*Current rates of pension.* The maximum standard rate was increased to \$949 per annum (\$18.25 a week) from 4 May 1972. This is payable to a single, widowed or divorced pensioner, a married man whose wife receives a wife's allowance, or a married pensioner whose spouse is not receiving an age or invalid pension, a tuberculosis allowance, or a service pension. The standard rate may also be paid to each of a married pensioner couple who are living apart for an indefinite period due to illness or infirmity of either or both. The maximum rate for a married pensioner couple was increased to \$1,664 per annum (\$32 a week) from 4 May 1972, (i.e., \$832 per annum or \$16 a week each). For a married person whose spouse receives a tuberculosis allowance, or a service pension, the maximum rate is also \$832 per annum (\$16 a week).

A wife's allowance may be granted, subject to the means test, to the wife of an invalid pensioner or of an age pensioner permanently incapacitated, blind, or who has the care of a child, if she is not receiving an age or invalid pension, or a service pension under the *Repatriation Act 1920-1972* (see Chapter 5, Repatriation). The maximum annual rate of a wife's allowance is \$416 per annum (\$8 a week).



Additional pension for each dependent child under 16 years is payable, subject to the means test, at the rate of \$234 per annum (\$4. 50 a week). Widowed or other unmarried age or invalid pensioners with a dependent child may receive a guardian's allowance up to \$4 a week, or up to \$6 a week if the child is under 6 years of age or is an invalid child requiring full-time care. Guardian's allowance is also subject to the means test. Eligibility for the additional pension for children is extended to include a child over sixteen years until he reaches twenty-one years, provided he is wholly or substantially dependent on the pensioner and is receiving full-time education at a school, college or university. Supplementary assistance of up to \$2 a week, subject to a special means test, is available to pensioners receiving the maximum standard rate pension if they pay rent or pay for board and lodging or for lodging.

At 30 June 1971, 393,107 age and 97,175 invalid pensioners in the standard rate category were receiving a pension of \$16 a week or more and 160,252 age and invalid pensioners were in receipt of supplementary assistance. In the married rate category 233,972 age and 21,560 invalid pensioners were receiving a pension of \$14.25 a week or more.

On the death of one member of a married pensioner couple the surviving pensioner spouse becomes entitled to receive, for up to six fortnightly instalments, the equivalent of the two pensions that would have been paid if the spouse had not died. For the purpose of this provision the term 'pensioner' includes a person in receipt of age, invalid or service pension; a wife's allowance; a rehabilitation allowance; or a sheltered employment allowance.

A table showing the maximum rates of pension operating since 1 July 1909 at dates prior to 14 October 1965 is included on page 608 of Year Book No. 51. Details of the respective rates and allowances payable since 14 October 1965 are included in subsequent Year Books.

**Means test.** Age and invalid pensions (other than pensions paid to blind persons) and allowances paid to wives are subject to a means test which applies to income and property. The rate of pension payable in any case depends on the claimant's *means as assessed*. When calculating means as assessed assets or property owned by the applicant are equated with income by treating each complete \$20 of assets above \$400 as equivalent to an income of \$2 a year. This amount is the property component. Means as assessed may consist entirely of the property component, entirely of income, or of various combinations of property component and income. The annual maximum rate of pension is affected when means exceed the allowable sum of:

For a single, widowed or divorced person . . . .	\$520
For a married pensioner couple . . . . .	\$884 (\$442 each)

The effect of the means test in the case of a single, widowed or divorced person, is to reduce the annual maximum standard rate of pension by half of the amount of any means as assessed in excess of \$520. No pension is payable where the value of property is \$24,580 or more (\$28,740 or more if qualified for a guardian's allowance at the lower rate and \$30,820 if qualified for the guardian's allowance at the higher rate). Supplementary assistance is reduced by the amount by which means as assessed exceed \$52. For a pensioner couple, the combined maximum married rate of pension is reduced by half of any means as assessed in excess of \$884. No pension is payable where the value of property is \$42,920 or more.

Certain types of income are excepted. The main exceptions are: income from property; gifts or allowances from children, parents, brothers, or sisters; benefits (other than annuities) from friendly societies; child endowment or other payments for children; Commonwealth health benefits and amounts received from registered benefit organisations. A pensioner's income may also be reduced by up to \$208 per annum (\$4 a week) for each dependent child under sixteen years (twenty-one years if a full-time student).

Certain types of property are disregarded. They include the permanent home of the pensioner, his furniture and personal effects, the surrender value (up to \$1,500) of life insurance policies, the capital value of annuities or contingent interests, and the value of reversionary interests.

For the purposes of the means test the income and property of a married person are considered to be half the total income and property of the husband and wife unless they are legally separated or in other special circumstances.



## AGE AND INVALID PENSIONS: STATES AND TERRITORIES, 30 JUNE 1971

<i>Pensions in force</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Age—									
Males .	87,288	62,377	41,817	23,447	18,071	7,667	690	683	242,040
Females .	212,866	151,475	87,000	54,315	40,153	17,227	887	1,748	565,671
Persons .	300,154	213,852	128,817	77,762	58,224	24,894	1,577	2,431	807,711
Invalid—									
Males .	31,157	17,756	11,746	6,151	4,499	2,523	346	205	74,383
Females .	25,239	13,586	10,026	5,023	3,656	1,793	214	155	59,692
Persons .	56,396	31,342	21,772	11,174	8,155	4,316	560	360	134,075

## NEW PENSIONERS, BY SEX AND MARITAL STATUS: AUSTRALIA, 1970-71

<i>Marital status</i>	<i>Age pensioners</i>			<i>Invalid pensioners</i>			<i>Total</i>
	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>	
Single(a) . . .	3,224	4,888	8,112	5,921	4,117	10,038	18,150
Married . . .	21,375	26,503	47,878	9,183	5,070	14,253	62,131
Widowed . . .	3,107	12,355	15,462	786	1,237	2,023	17,485
Divorced . . .	529	993	1,522	582	479	1,061	2,583
Total . . .	28,235	44,739	72,974	16,472	10,903	27,375	100,349

(a) Includes married but permanently separated.

The average age of new age pensioners was 68.1 years for men and 65.7 years for women.

## NEW INVALID PENSIONERS, BY AGE GROUP: AUSTRALIA, 1970-71

		<i>16-19 years</i>	<i>20-44 years</i>	<i>45-59 years</i>	<i>60-64 years</i>	<i>65 years and over</i>	<i>Total</i>
Males .	number	1,250	2,997	6,534	5,267	424	16,472
Females .	number	1,183	2,530	6,796	201	193	10,903
Persons .	number	2,433	5,527	13,330	5,468	617	27,375
	<i>Per cent</i>	9	20	49	20	2	100

NOTE. Persons at or above the qualifying age for age pensions, when granted invalid pensions, are generally those with insufficient residence to qualify for age pension.

## AGE AND INVALID PENSIONS: SUMMARY, AUSTRALIA, 1966-67 TO 1970-71

Year	Pensioners at end of year				Total payments during year(b)	Average weekly pension as at end of year		
	Age		Invalid	Total		Age(c)	Invalid (c)	Age and invalid combined (c)
	Number	Rate(a)						
			No.	No.	\$'000	\$	\$	\$
1966-67	651,363	(d)532	112,314	763,677	481,840	12.38	13.30	12.52
1967-68	(e)682,265	546	(e)114,745	(e)797,010	513,984	(f)12.22	13.37	(f)12.39
1968-69	(g)705,311	555	(g)121,744	(g)827,055	558,587	13.00	14.70	13.26
1969-70	779,007	602	133,766	912,773	641,982	13.61	15.70	13.91
1970-71	807,711	615	134,075	941,786	702,276	14.36	16.54	14.67

(a) Number of pensioners per 1,000 persons of pensionable age (males aged 65 years and over and females aged 60 years and over). (b) Includes allowances and supplementary assistance. (c) Includes supplementary assistance, additional pensions for children, and guardian's allowance, where applicable. (d) For earlier years persons of pensionable age—see footnote (a)—excludes Aborigines, while the number of pensioners includes Aborigines throughout. (e) The 1967-68 figures are adjusted by reducing the number of invalid pensioners by 3,178 and increasing the number of age pensioners by 1,485 following the introduction of computer processing in New South Wales. (f) Decrease in average rates for age pensions at 30 June 1968 was due to the increased number of new pensioners who became eligible for part pensions as a result of amending legislation approved in April 1967. (g) The 1968-69 figures are adjusted by reducing the number of invalid pensioners by 1,583 and increasing the number of age pensioners by 1,223 following the introduction of computer processing in Victoria.

**Widows' pensions**

*Rates and conditions.* Widows' pensions are payable according to the following classes. The rates shown are those payable from 25 April 1972 when widows' pensions were increased.

**Class 'A'.** A widow who has the custody, care and control of one or more eligible children under the age of sixteen years or eligible student child—The maximum amount payable is the standard rate pension of \$949 per annum (\$18.25 a week) and a mother's allowance of up to \$208 per annum (\$4 a week) which is increased to \$312 per annum (\$6 a week) if caring for a child under six years of age or an invalid child requiring full-time care. In addition, extra pension of \$234 per annum (\$4.50 a week) for each child under sixteen years is payable subject to the means test. Payment may be made for a child over sixteen years until he or she reaches twenty-one years, if he or she is wholly or substantially dependent on the widow and is receiving full-time education at a school, college or university.

**Class 'B'.** A widow who has no eligible children under sixteen years of age or full-time student children in her custody, care and control, and who is not less than fifty years of age or who, after having attained the age of forty-five years, ceased to receive a Class 'A' widow's pension because she no longer had the custody, care and control of a child—The maximum amount payable is \$832 per annum (\$16 a week).

**Class 'C'.** A widow who is under fifty years of age and has no eligible children under the age of sixteen years, or full-time student children, in her custody, care and control, but is in necessitous circumstances within the twenty-six weeks after the death of her husband—\$16.00 a week for not more than twenty-six weeks after the death of her husband. If the widow is pregnant this period may be extended until the child's birth. She may then become eligible for a Class 'A' widow's pension.

Widow pensioners may receive supplementary assistance of up to \$104 per annum (\$2 a week), subject to a special means test, if they pay rent or pay for board and lodging or for lodging.

For classes 'A' and 'B' the term 'widow' includes a wife who has been deserted by her husband without just cause for a period of at least six months; a divorcee; a woman whose husband has been imprisoned for at least six months; and a woman whose husband is in a mental hospital. Certain dependent females also may qualify for 'A', 'B' or 'C' Class pensions.

A period of residence in Australia before claiming pension is not required if a woman and her husband were residing permanently in Australia when she became a widow. In other circumstances, five years continuous residence immediately preceding lodgment of the claim is required, but this is waived in the case of a woman whose husband has died overseas if she has resided continuously in Australia for ten years at any time and returns to Australia to live.

A widow's pension is not payable to a woman receiving an age or invalid pension, a sheltered employment allowance, a tuberculosis allowance, or a war widow's pension, or to a deserted wife or divorcee who has not taken reasonable action to obtain maintenance from her husband or former husband.

*Means test.* Widows' pensions are subject to a means test on income and property. The rate of pension payable in any case depends on the claimant's *means as assessed*. When calculating the means as assessed of a claimant for Class 'A' widow's pension, no amount in respect of property is taken into account where the value of the widow's property is \$4,500 or less. If the value of property exceeds \$4,500 the widow's total assets or property are equated with income by treating each complete \$20 of assets above \$2,000 as equivalent to an income of \$2 a year. This amount is the property component. Means as assessed may consist entirely of the property component, entirely of income, or of various combinations of the property component and income. The method for calculating the means as assessed of a claimant for Class 'B' widow's pension is the same as for single, widowed or divorced claimants for age or invalid pension (see page 394). In the case of a Class 'A' widow the maximum rate of pension plus the appropriate mother's allowance and additional pension for children, are affected when the widow's means as assessed exceed the allowable sum of \$520. The annual maximum standard rate of pension plus the allowances mentioned above are reduced by half of the amount of any means as assessed in excess of \$520. No pension is payable where the widow has property valued at \$30,340 or more, or if caring for a child under six years of age or an invalid child requiring full-time care, where she has property valued at \$32,420 or more. For a Class 'B' widow the annual maximum rate of pension is reduced by half of the amount of any means as assessed in excess of \$520. No pension is payable where the widow has property valued at \$22,240 or more. There is no specific means test for the Class 'C' pension, which is paid only where it is evident that a widow has insufficient means of support. The types of income and property disregarded for means test purposes are the same as for age and invalid pensions. Supplementary assistance is reduced by the amount by which *means as assessed* exceed \$52.

The average age of new widow pensioners admitted during 1970-71 was: Class 'A', 36.5 years; Class 'B', 56.6 years; Class 'C', 41.8 years; and for all classes, 44.0 years.

#### WIDOWS' PENSIONS: STATES, TERRITORIES, ETC., 1970-71

State, Territory, etc.	Number admitted —all classes (a)	Pensions current at end of year				Average weekly pension at end of year (b)	Amount paid in pensions during year (c)
		Class 'A'	Class 'B'	Class 'C'	All classes		
						\$	\$'000
New South Wales . . . . .	6,165	17,154	15,684	35	32,873	19.68	32,945
Victoria . . . . .	5,231	12,847	11,640	22	24,509	19.64	24,366
Queensland . . . . .	2,726	7,090	6,428	21	13,539	20.02	13,698
South Australia . . . . .	1,740	4,623	4,415	2	9,040	19.61	8,969
Western Australia . . . . .	1,408	3,050	3,328	14	6,392	19.03	6,172
Tasmania . . . . .	728	1,842	1,295	1	3,138	20.87	3,327
Northern Territory . . . . .	109	241	154	..	395	22.83	437
Australian Capital Terri- tory . . . . .	116	299	213	1	513	19.55	496
Abroad . . . . .	..	(d)	(d)	(d)	(d)	..	104
<b>Total . . . . .</b>	<b>18,223</b>	<b>47,146</b>	<b>43,157</b>	<b>96</b>	<b>90,399</b>	<b>19.72</b>	<b>90,514</b>

(a) Excludes transfers from one class to another. (b) Includes supplementary assistance and allowances. (c) Includes payments to benevolent homes for maintenance of pensioners. (d) Included in the figures for the State or Territory in which the pensioner is normally domiciled.

#### WIDOWS' PENSIONS: SUMMARY, AUSTRALIA, 1966-67 TO 1970-71

Year	Number admitted —all classes (a)	Pensions current at end of year				Average weekly pension at end of year (b)	Amount paid in pensions during year (c)
		Class 'A'	Class 'B'	Class 'C'	All classes		
						\$	\$'000
1966-67 . . . . .	15,727	34,526	38,259	105	72,890	15.81	56,438
1967-68 . . . . .	16,104	(d)35,899	(d)39,065	105	(d)75,069	(e)15.79	61,061
1968-69 . . . . .	15,993	38,038	39,768	91	77,897	17.63	69,080
1969-70 . . . . .	22,466	44,064	42,771	86	86,921	18.96	81,753
1970-71 . . . . .	18,223	47,146	43,157	96	90,399	19.72	90,514

(a) Excludes transfers from one class to another. (b) Includes supplementary assistance and allowances. (c) Includes payments to benevolent homes for maintenance of pensioners. (d) During 1967-68, a reduction of 769 Class 'A' and 233 Class 'B' pensioners was made following the introduction of computer processing in New South Wales. (e) Decrease in average rate due mainly to the increased number of new pensioners who became eligible for part pension as a result of amending legislation approved in April 1967.

For details of training scheme for widow pensioners, see page 405.



**Funeral benefits**

A benefit of up to \$40 is payable to an eligible age, invalid or widow pensioner who is liable for the funeral costs of another such deceased pensioner, a deceased child or a deceased spouse; a benefit of up to \$20 is payable to any (other) person liable for the funeral costs of a deceased age or invalid pensioner in respect of whose burial a funeral benefit may be granted.

**FUNERAL BENEFITS GRANTED: STATES, TERRITORIES, ETC., 1965-66 TO 1970-71**  
(Number)

<i>State, Territory, etc.</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
New South Wales . . . .	17,015	18,567	17,092	21,830	20,215	22,430
Victoria . . . . .	11,354	12,386	12,292	13,897	12,844	14,881
Queensland . . . . .	6,596	7,188	7,129	7,930	7,754	8,505
South Australia . . . .	3,751	4,031	4,531	4,855	4,643	4,937
Western Australia . . .	2,709	3,129	3,151	3,397	3,442	3,741
Tasmania . . . . .	1,340	1,347	1,345	1,438	1,437	1,408
Northern Territory . . .	8	2	7	5	15	8
Australian Capital Territory .	92	108	122	136	148	175
Abroad . . . . .	2	6	3	3	4	3
<b>Total . . . . .</b>	<b>42,867</b>	<b>46,764</b>	<b>45,672</b>	<b>53,491</b>	<b>50,502</b>	<b>56,088</b>

Total cost of funeral benefits granted during 1970-71 was \$1,653,231.

**Maternity allowances**

Maternity allowances are paid to provide financial assistance towards the expenses associated with the birth of children and are additional to the benefits provided under the Commonwealth health scheme. They are not subject to a means test.

A maternity allowance is payable to a woman who gives birth to a child if she resides, or intends to reside permanently in Australia and gives birth to the child in Australia, and to a woman who gives birth to a child on board a ship travelling to Australia if she intends to reside permanently in Australia, provided she receives no benefit similar to a maternity allowance from the country from which she came. A woman who gives birth to a child during a temporary absence from Australia may also be eligible. An alien mother may receive the allowance if she or her husband resided in Australia for at least twelve months immediately prior to the birth of the child, or if she is likely to remain in Australia permanently. Payment may be made in respect of the birth of a still-born child, or a child which lives for less than twelve hours, if the child had developed for at least five and a half months.

*Rates of allowance.* The allowance is \$30 if the mother has no other children under sixteen, \$32 if she has one or two other children under sixteen, and \$35 if she has three or more other children under sixteen. In the case of multiple births the allowance is increased by \$10 for each additional child born. An advance payment of \$20 may be made four weeks before the expected date of birth. The balance is payable immediately after the birth.

**MATERNITY ALLOWANCES: CLAIMS PAID AT EACH RATE**  
**STATES AND TERRITORIES, ETC., 1970-71**  
(Number)

State, Territory, etc.	Multiple births											Total claims paid
	Single births			Twins			Triplets			Quad- ruplets		
	\$30	\$32	\$35	\$40	\$42	\$45	\$50	\$52	\$55	\$60	\$62	
New South Wales	37,592	43,672	12,281	345	506	216	1	2	3	..	..	94,618
Victoria	28,698	35,653	10,651	255	391	167	3	4	1	..	1	75,824
Queensland	14,416	17,056	6,672	89	142	81	1	1	..	..	..	38,458
South Australia	8,890	10,796	2,740	77	126	44	..	2	1	..	..	22,676
Western Australia	9,190	10,828	3,179	66	103	50	..	1	..	..	..	23,417
Tasmania	3,205	3,928	1,377	26	45	11	2	..	..	..	..	8,594
Northern Territory	922	1,113	617	5	6	4	..	..	1	..	..	2,668
Australian Capital Territory	1,457	1,766	464	13	19	5	1	..	..	..	..	3,725
Abroad	51	18	3	..	..	..	..	..	..	..	..	72
Total	104,421	124,830	37,984	876	1,338	578	8	10	6	..	1	270,052



**MATERNITY ALLOWANCES: CLAIMS PAID, AUSTRALIA  
1965-66 TO 1970-71**

<i>Year</i>	<i>Number single births</i>	<i>Multiple births</i>	<i>Total claims paid</i>	<i>Amount paid</i>
				\$'000
1965-66 . . . . .	221,889	2,422	224,311	7,159
1966-67 . . . . .	226,339	2,446	228,785	7,294
1967-68 . . . . .	228,324	2,452	230,776	7,349
1968-69 . . . . .	248,599	2,688	251,287	7,960
1969-70 . . . . .	249,149	2,755	251,904	8,000
1970-71 . . . . .	267,235	2,817	270,052	8,554

**Child endowment**

A person who is resident in Australia and has the custody, care, and control, of one or more children under the age of sixteen years or of a full-time student child over sixteen but under twenty-one years, or an approved institution of which children are inmates, is qualified to receive an endowment in respect of each such child. Full-time student children are those receiving full-time education at a school, college or university and who are not in employment or engaged in work on their own account. There are provisions to meet cases of families divided because of divorce, separation, unemployment or death of a parent. There is no means test.

Twelve months residence in Australia is required if the claimant and the child were not born here, but this requirement is waived if the Department of Social Services is satisfied that they are likely to remain in Australia permanently. Where the child's father is not a British subject, endowment is payable if the child was born in Australia, if the mother is a British subject, or if the Department is satisfied that the child is likely to remain permanently in Australia. Under certain conditions, endowment may be paid to Australians who are temporarily absent overseas.

*Rates of endowment.* Since 12 October 1971 the weekly rates have been: children under sixteen years—50 cents for the first or only child; \$1.00 for the second; \$2.00 for the third; and then increases of 25 cents for each subsequent child, making \$2.25 for the fourth, \$2.50 for the fifth and so on. For each eligible student child the rate is \$1.50. The rate payable for each child under sixteen years in an approved institution is \$2.00 a week.

*Number of claims and endowed children—children under sixteen years.* The number of families receiving child endowment at 30 June 1971 in respect of children under sixteen years was 1,797,628 an increase of 47,894 or 2.74 per cent during the year.

**CHILD ENDOWMENT: CLAIMS AND ENDOWED CHILDREN UNDER 16 YEARS  
STATES, TERRITORIES, ETC., 30 JUNE 1971**

State, Territory, etc.	Family groups			Approved institutions		Total endowed children under 16 years
	Claims in force	Endowed children under 16 years		Number (a)	Endowed child inmates under 16 years	
		Number	Average number per claim			
New South Wales . . . . .	636,912	1,355,950	2.13	131	5,840	1,361,790
Victoria . . . . .	500,385	1,090,447	2.18	126	5,439	1,095,886
Queensland . . . . .	251,805	570,859	2.27	41	1,790	572,649
South Australia . . . . .	168,289	361,652	2.15	63	1,294	362,946
Western Australia . . . . .	147,507	329,671	2.24	73	4,177	333,848
Tasmania . . . . .	57,100	129,322	2.26	23	429	129,751
Northern Territory . . . . .	13,034	31,103	2.39	11	252	31,355
Australian Capital Territory . . . . .	22,343	49,123	2.20	1	27	49,150
Abroad . . . . .	253	527	2.08	..	..	527
<b>Total . . . . .</b>	<b>1,797,628</b>	<b>3,918,654</b>	<b>2.18</b>	<b>469</b>	<b>19,248</b>	<b>3,937,902</b>

(a) All institutions approved for receipt of endowment.

The following table shows, as at 30 June 1971, the number of claims in force and the number of endowed children under sixteen years in family groups, classified according to the number of endowed children in the family group. The families included in the table are not necessarily made up entirely of the children of one marriage, but may include step-children, foster children, adopted children, and any other children in the custody, care and control of the claimant.

**CHILD ENDOWMENT: ENDOWED CHILDREN UNDER 16 YEARS IN FAMILY GROUPS  
TOTAL, 30 JUNE 1971**

<i>Number of endowed children under 16 years in family group</i>	<i>Claims in force</i>	<i>Endowed children under 16 years</i>	<i>Number of endowed children under 16 years in family group</i>	<i>Claims in force</i>	<i>Endowed children under 16 years</i>
1 . . . . .	616,154	616,154	9 . . . . .	1,048	9,432
2 . . . . .	608,243	1,216,486	10 . . . . .	335	3,350
3 . . . . .	341,346	1,024,038	11 . . . . .	102	1,122
4 . . . . .	147,646	590,584	12 . . . . .	42	504
5 . . . . .	52,377	261,885	13 . . . . .	18	234
6 . . . . .	20,125	120,750	14 . . . . .	2	28
7 . . . . .	7,456	52,192	15 or more . . . . .	3	47
8 . . . . .	2,731	21,848	<b>Total . . . . .</b>	<b>1,797,628</b>	<b>3,918,654</b>

**CHILD ENDOWMENT: CLAIMS AND ENDOWED STUDENT CHILDREN  
STATES, TERRITORIES, ETC., 30 JUNE 1971**

State, Territory, etc.	Family groups			Approved institutions		Total endowed student children
	Claims in force	Endowed student children		Number(a)	Endowed student child inmates	
		Number	Average number per claim			
New South Wales . . . . .	73,126	80,144	1.10	32	74	80,218
Victoria . . . . .	66,874	74,497	1.11	31	137	74,634
Queensland . . . . .	15,946	17,723	1.11	13	70	17,793
South Australia . . . . .	20,118	21,869	1.09	17	145	22,014
Western Australia . . . . .	12,316	13,449	1.09	23	288	13,737
Tasmania . . . . .	5,005	5,514	1.10	6	11	5,525
Northern Territory(b) . . . . .	552	614	1.11	2	2	616
Australian Capital Territory . . . . .	3,043	3,469	1.14	..	..	3,469
Abroad . . . . .	19	22	1.16	..	..	22
Total . . . . .	196,999	217,301	1.10	124	727	218,028

(a) Included with approved institutions in second table on page 399. (b) Endowment payments are now being made direct to Aboriginal families instead of through institutions.

**CHILD ENDOWMENT: ENDOWED STUDENT CHILDREN IN FAMILY GROUPS  
TOTAL, 30 JUNE 1971**

<i>Number of endowed student children in family group</i>	<i>Claims in force</i>	<i>Endowed student children</i>	<i>Number of endowed student children in family group</i>	<i>Claims in force</i>	<i>Endowed student children</i>
1 . . . . .	177,729	177,729	4 . . . . .	27	108
2 . . . . .	18,276	36,552	5 or more . . . . .	2	17
3 . . . . .	965	2,895	<b>Total . . . . .</b>	<b>196,999</b>	<b>217,301</b>

**CHILD ENDOWMENT: CHILDREN UNDER 16 YEARS  
LIABILITY AND EXPENDITURE, STATES, TERRITORIES, ETC., 1970-71**  
(\$'000)

<i>State, Territory, etc.</i>	<i>Annual liability at 30 June 1971</i>			<i>Total payments to endowees and institutions during year(a)</i>
	<i>Family groups</i>	<i>Approved institutions</i>	<i>Total</i>	
New South Wales . . . .	64,343	456	64,799	61,425
Victoria . . . . .	52,608	424	53,032	50,514
Queensland . . . . .	28,453	140	28,593	27,442
South Australia . . . .	17,144	101	17,245	16,633
Western Australia . . .	16,037	326	16,363	15,498
Tasmania . . . . .	6,399	33	6,432	6,252
Northern Territory(b) . .	1,630	20	1,650	1,440
Australian Capital Territory	2,354	2	2,356	2,177
Abroad . . . . .	25	..	25	(c)54
<b>Total . . . . .</b>	<b>188,992</b>	<b>1,501</b>	<b>190,493</b>	<b>181,436</b>

(a) See footnote (b) to third table below. (b) Endowment payments are now being made direct to Aboriginal families instead of through institutions. (c) Includes expenditure for endoweed student children; separate figures are not available.

**CHILD ENDOWMENT: STUDENT CHILDREN, LIABILITY, AND  
EXPENDITURE, STATES, TERRITORIES, ETC., 1970-71**  
(\$'000)

<i>State, Territory, etc.</i>	<i>Annual liability at 30 June 1971</i>			<i>Total payments to endowees and institutions during year</i>
	<i>Family groups</i>	<i>Approved institutions</i>	<i>Total</i>	
New South Wales . . . .	6,251	6	6,257	6,535
Victoria . . . . .	5,811	11	5,822	5,410
Queensland . . . . .	1,382	5	1,387	1,757
South Australia . . . .	1,706	11	1,717	1,651
Western Australia . . .	1,049	22	1,071	926
Tasmania . . . . .	430	1	431	434
Northern Territory . . .	48	..	48	45
Australian Capital Territory	271	..	271	274
Abroad . . . . .	2	..	2	(a)
<b>Total . . . . .</b>	<b>16,949</b>	<b>57</b>	<b>17,006</b>	<b>17,031</b>

(a) Included in preceding table showing expenditure for endoweed children under sixteen years; separate figures are not available.

**CHILD ENDOWMENT: SUMMARY, AUSTRALIA, 1965-66 TO 1970-71**

<i>At end of year</i>						
<i>Family group claims in force</i>						
<i>Year</i>	<i>For children under 16 years(a)</i>	<i>For student children(a)</i>	<i>Approved institutions</i>	<i>Total endoweed children</i>	<i>Annual liability for endowment (b)</i>	<i>Total payments during year (b)</i>
					\$'000	\$'000
1965-66 . . . . .	1,610,490	132,900	488	3,762,646	182,288	176,432
1966-67 . . . . .	1,640,390	151,623	487	3,834,917	185,940	(c)199,282
1967-68 . . . . .	1,669,629	158,488	491	3,890,853	196,397	187,920
1968-69 . . . . .	1,701,914	187,500	493	3,996,042	202,034	193,263
1969-70 . . . . .	1,749,734	194,576	456	4,079,378	205,065	(c)220,143
1970-71 . . . . .	1,797,628	196,999	469	4,155,930	207,499	198,467

(a) Claims by families with children under sixteen and student children are shown in both columns. Information on the number of families having such dual claims is not available. (b) A number of endowments are paid every twelve weeks. During two years out of every three there are four such payments but every third year there are five. Figures for annual liability therefore, reflect trends in expenditure on child endowment more accurately than do figures for payments. (c) Expenditure for this year includes five twelve-weekly payments for endoweed children under 16 years.



### Unemployment and sickness benefits

Unemployment and sickness benefits are paid to males over sixteen and under sixty-five years of age, and females over sixteen and under sixty years of age, who are unemployed or who are temporarily incapacitated for work and thereby suffer loss of income. They must have been living in Australia during the preceding twelve months or be likely to remain permanently in Australia. There is a means test on income. A person receiving an age, invalid or widow's pension, or a service pension (as distinct from a war pension) under the *Repatriation Act* 1920-1972 or a tuberculosis allowance, is ineligible to receive a benefit.

For unemployment benefit purposes, a person must establish that he is unemployed, that his unemployment is not due to his being a direct participant in a strike, that he is capable and willing to undertake suitable work, and that he has taken reasonable steps to obtain such work. Registration for employment with the Commonwealth District Employment Office is necessary. For sickness benefit purposes, a person must establish that he is temporarily incapacitated for work because of sickness or accident and that he has thereby suffered a loss of salary, wages or other income. A married woman is not eligible to receive a sickness benefit if it is reasonably possible for her husband to maintain her. Where her husband is able to maintain her only partially, a benefit may be paid at such rate as is considered reasonable in the circumstances.

**Rates of benefit.** The maximum weekly rates of unemployment and sickness benefit payable and the permissible income in respect of benefit periods which commenced on or after 19 February 1972 are as follows.

	Maximum weekly rate \$	Permissible weekly income \$
Adult (21 and over) or married minor . . . .	17.00	6.00
Unmarried person, aged 18-20 years . . . .	11.00	3.00
Unmarried person, aged 16-17 years . . . .	7.50	3.00

The adult rate of benefit is payable to unmarried minors having no parent living in Australia.

Additional benefit of \$8 a week may be paid for a dependent spouse and \$4.50 a week for each child under sixteen years of age in a beneficiary's care. Additional benefit, at the same rate as that for a dependent spouse, may be paid where a woman is keeping house for a claimant who has one or more children under sixteen years of age in his care. It may be granted only if no such benefit is payable for his wife, and the housekeeper is substantially dependent on him but not employed by him.

After six consecutive weekly payments, sickness benefit may be increased to the appropriate long-term rate shown in the table below if the person receiving benefit is not in hospital, or is in hospital but has one or more dependants.

	Maximum weekly rate \$	Permissible weekly income \$
Adult (21 and over) or married minor or unmarried minor with no parent in Australia . . . .	18.25	6.00
Unmarried person, aged 16-20 years . . . .	12.00	3.00

Additional benefit for dependants continues at the same rate as ordinary sickness benefit and a supplementary allowance of up to \$2.00 a week may be paid to beneficiaries if they pay rent or pay for board and lodging or for lodging.

The weekly rate of benefit is reduced by the amount by which a beneficiary's other income exceeds the amount of permissible income. For unemployment benefit purposes the income of the spouse is also taken into account unless the claimant and his spouse are permanently separated. For sickness benefit purposes the income from an approved friendly society, or other similar approved body, in respect of the incapacity for which sickness benefit is payable is disregarded. 'Income' does not include child endowment or other payments for children, Commonwealth health benefits and payments from registered benefit organisations, a tuberculosis allowance, or an amount paid in reimbursement of medical, dental or similar expenses. The supplementary allowance is reduced by the amount by which a beneficiary's other income exceeds \$1.00 a week.

The amount of compensation, damages or similar payment, or war pension, if paid in respect of the same incapacity as that for which sickness benefit is claimed, is deducted from the sickness benefit. If not paid in respect of the same incapacity, compensation is regarded as income and war pension is ignored.

There is a waiting period of seven days during which unemployment or sickness benefit is not payable, but this waiting period is not required more than once in any period of thirteen weeks.

### Special benefit

A special benefit may be granted to a person not qualified for unemployment or sickness benefit who is not receiving an age, invalid or widow's pension, a service pension or a tuberculosis allowance and who, because of age, physical or mental disability or domestic circumstances, or for any other reason, is unable to earn a sufficient livelihood for himself and his dependants. Recipients of special benefits include, among others, persons caring for invalid parents, and persons ineligible for age, invalid or widow's pensions because of lack of residence qualifications.

Special benefits are also paid to migrants who are in Commonwealth centres or hostels awaiting their first placement in employment in Australia. During this time they receive a short instruction in English and in Australian conditions to facilitate their assimilation into the community and employment.

No means test or residence requirement is laid down but there is an overriding requirement that a person must be suffering hardship to be granted a special benefit.

The maximum rate of special benefit is the same as for unemployment benefit.

### UNEMPLOYMENT, SICKNESS, AND SPECIAL BENEFITS STATES AND TERRITORIES, 1970-71(a)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number admitted to benefit during year—									
Unemployment—									
Males . . . . .	25,098	22,412	24,376	14,320	9,995	2,884	269	403	99,757
Females . . . . .	12,052	6,859	9,168	5,695	2,723	1,504	76	129	38,206
Persons . . . . .	37,150	29,271	33,544	20,015	12,718	4,388	345	532	137,963
Sickness—									
Males . . . . .	22,812	13,741	9,654	5,312	4,748	2,202	346	291	59,106
Females . . . . .	5,828	3,532	2,153	1,291	1,027	485	77	102	14,495
Persons . . . . .	28,640	17,273	11,807	6,603	5,775	2,687	423	393	73,601
Special—									
Ordinary—									
Males . . . . .	741	342	281	55	71	29	4	4	1,527
Females(b) . . . . .	4,882	3,273	1,957	1,008	956	359	63	95	12,593
Persons . . . . .	5,623	3,615	2,238	1,063	1,027	388	67	99	14,120
Migrants—									
Persons . . . . .	5,775	1,754	457	876	..	..	..	..	8,862
Total—									
Males(c) . . . . .	48,651	36,495	34,311	19,687	14,814	5,115	619	698	160,390
Females(c) . . . . .	22,762	13,664	13,278	7,994	4,706	2,348	216	326	65,294
Persons(d) . . . . .	77,188	51,913	48,046	28,557	19,520	7,463	835	1,024	234,546
Persons on benefit at end of year—									
Unemployment—									
Males . . . . .	3,857	4,095	2,319	1,702	1,262	531	1	20	13,787
Females . . . . .	1,819	1,191	1,216	758	342	251	1	6	5,584
Persons . . . . .	5,676	5,286	3,535	2,460	1,604	782	2	26	19,371
Sickness—									
Males . . . . .	3,359	2,384	1,101	703	440	273	41	19	8,320
Females . . . . .	916	613	301	219	170	76	8	9	2,312
Persons . . . . .	4,275	2,997	1,402	922	610	349	49	28	10,632
Special—									
Ordinary—									
Males . . . . .	154	65	49	16	15	7	2	4	312
Females(b) . . . . .	1,471	955	610	274	223	143	16	21	3,713
Persons . . . . .	1,625	1,020	659	290	238	150	18	25	4,025
Migrants—									
Persons . . . . .	172	6	20	36	..	..	..	..	234
Total—									
Males(c) . . . . .	7,370	6,544	3,469	2,421	1,717	811	44	43	22,419
Females(c) . . . . .	4,206	2,759	2,127	1,251	735	470	25	36	11,609
Persons(d) . . . . .	11,748	9,309	5,616	3,708	2,452	1,281	69	79	34,262
Benefits paid during year—									
Unemployment . . \$'000	2,945	2,345	2,883	1,378	828	366	29	20	10,795
Sickness . . . \$'000	3,950	2,877	1,445	840	719	327	47	58	10,262
Special(d) . . . \$'000	1,028	594	361	190	151	71	13	11	2,420
Total benefits paid . \$'000	7,923	5,817	4,688	2,408	1,699	764	89	89	23,478

(a) Excludes a small number of persons receiving unemployment benefits in outlying areas. (b) Since June 1968, special benefits, instead of sickness or unemployment benefits, became payable for confinement cases. (c) Excludes migrants in Commonwealth centres or hostels awaiting their first placement in employment in Australia. (d) Includes migrants in the category described in footnote (c).

**UNEMPLOYMENT, SICKNESS, AND SPECIAL BENEFITS: SUMMARY, AUSTRALIA  
1965-66 TO 1970-71**

Year	Number admitted to benefit during year			Average number of persons on benefit at end of each week			Amount paid in benefits		
	Unemployment	Sickness	Special (a)	Unemployment	Sickness	Special (a)	Unemployment	Sickness	Special (a)
1965-66	114,497	69,585	7,838	14,927	10,044	2,507	\$'000 7,813	\$'000 6,483	\$'000 1,261
1966-67	151,024	72,276	9,340	20,650	10,108	2,413	11,186	6,611	1,247
1967-68	158,133	72,924	11,615	21,543	9,935	2,532	11,242	6,290	1,300
1968-69	132,914	63,024	(b)21,928	17,818	8,407	(b)4,307	9,268	5,531	(b)2,031
1969-70	109,383	66,766	23,129	13,212	8,572	4,445	8,868	7,146	2,578
1970-71	137,963	73,601	22,982	14,979	9,524	4,293	10,795	10,262	2,420

(a) Includes migrants in Commonwealth centres or hostels awaiting their first placement in employment in Australia.

(b) Since June 1968, special benefits instead of sickness or unemployment benefits, became payable for confinement cases.

### Sheltered employment allowance

This allowance was introduced on 30 June 1967 as an alternative to an invalid pension. It is available to disabled employees engaged in approved sheltered employment who have been receiving invalid pension or are likely to become medically qualified for such pension if not provided with sheltered employment.

The maximum rate of the allowance is the same as the maximum rate of invalid pension. Additional benefits such as wife's allowance and additional pension for children that would be paid if the person were an invalid pensioner are added to the sheltered employment allowance to form one composite payment. The means test is the same as for invalid pensions.

In the year ended 30 June 1971, one workshop was approved under the *Social Services Act* 1947-1971 to pay sheltered employment allowances on behalf of the Department of Social Services. At 30 June 1971 twelve workshops were paying the allowances to 776 disabled employees. Employees in other sheltered workshops continued to receive invalid pensions. Expenditure during the year 1970-71 was \$590,476.

### Commonwealth Rehabilitation Service

The Commonwealth Rehabilitation Service was set up to help persons who are unable to work because of physical handicap, or who have had to give up their employment because of sickness or injury. It helps disabled persons to reach their maximum physical fitness and to prepare for suitable employment. They are given suitable treatment and training, the cases selected being those in which the person's disability is remediable and there are reasonable prospects of his engaging in a suitable vocation within three years after the commencement of treatment or training.

The service is available to invalid and widow pensioners, persons receiving unemployment, sickness or special benefits, national servicemen who are disabled at time of discharge but are ineligible for rehabilitation assistance from the Repatriation Department, persons receiving tuberculosis allowances, and persons aged fourteen or fifteen who, without treatment and training, would be likely to qualify for an invalid pension on reaching the age of sixteen years. During treatment, payment of pension or benefit continues. When vocational training begins the pension or benefit is suspended and a rehabilitation allowance, together with a training allowance of \$4.00 a week, is paid instead. With an invalid pensioner, or a sickness, unemployment, or special beneficiary, the rehabilitation allowance is equivalent to and calculated in the same manner as an invalid pension. For a widow pensioner the rate is the same as that of the widow's pension.

Living-away-from-home allowances are paid where necessary. Fares and living expenses (including those of an attendant where required) incurred in connection with treatment, training or attendance for an interview or for medical examination may also be paid. Necessary artificial replacements, surgical aids and appliances may be provided, free of charge, to a person receiving treatment and training or who needs them to assist him to engage in a suitable vocation after the discontinuance of his treatment and training or who needs them otherwise to assist in his rehabilitation. He may also be provided with books, equipment and tools of trade costing up to \$80 in any period of twelve months. Where books, equipment and tools of trade provided to assist a person to engage in a suitable vocation are retained by him, he is liable to repay the cost but is not required to make repayment until after he has commenced employment. The repayment may be made by instalments. If the treatment or vocational training does not result in the trainee being able to engage in employment, he receives the pension or benefit to which he is entitled. Disabled persons who cannot qualify for the free service may pay for rehabilitation themselves, or they may be sponsored by government or private organisations.



*Numbers dealt with by the service***COMMONWEALTH REHABILITATION SERVICE: AUSTRALIA, 1970-71**

Class of beneficiary	Referred	Accepted	Completed training	Placed in employment		Expenditure during year \$'000
				After training	Without training	
Invalid pensioners . . . . .	12,367	457	67	89	266	n.a.
Widow pensioners . . . . .	11	2	..	..	..	
Unemployment and sickness beneficiaries . . . . .	17,895	984	115	137	649	
Special beneficiaries . . . . .	26	2	1	2	..	
Recipients of tuberculosis allowances . . . . .	21	4	4	3	4	
Persons whose rehabilitation is continued under Section 135P of the Social Services Act(a) . . . . .	4	4	..	..	..	
Persons provided with rehabilitation under Section 135S of the Social Services Act(b) . . . . .	169	141	2	10	114	
Persons aged 14-15 years . . . . .	132	66	16	14	29	
<b>Total . . . . .</b>	<b>30,625</b>	<b>1,660</b>	<b>205</b>	<b>255</b>	<b>1,062</b>	<b>3,106</b>

(a) Persons receiving invalid pensions, etc., when accepted for rehabilitation and who, on becoming ineligible for the pension, etc., are provided with rehabilitation on payment of the cost. (b) Persons provided with rehabilitation on payment of the cost by another authority.

Of the 1,660 persons accepted during 1970-71, 75 per cent were under forty years of age. The average number undergoing rehabilitation at the end of each month during the year was 1,045.

**Training scheme for widow pensioners**

In September 1968 a scheme was introduced to help widow pensioners acquire vocational skills which will enable them to undertake gainful employment. Training may take the form of refresher courses or it may involve training for new skills. During training the widow continues to receive her pension for as long as she remains eligible. In addition to pension, she may qualify for a training allowance of \$4 a week and a living-away-from-home allowance of \$5 a week. The cost of tuition fees and fares may also be met; and books, equipment, appliances and tools of trade necessary during training may be supplied free of charge up to the value of \$80 in any period of twelve months. A loan of up to \$400 is available in certain circumstances to enable equipment to be purchased for employment at home. Of the 3,574 applications received during 1970-71, 2,190 were accepted for training and of this number 2,022 commenced training. During the year 869 completed training and 680 were placed in employment. Expenditure during the year was \$539,345.

**Commonwealth assistance to welfare organisations**

*The Aged Persons Homes Act* 1954-1969 is designed to encourage the provision of homes in which aged persons may reside in conditions approaching normal domestic life.

To be eligible for assistance under the Act an organisation must be:

- (a) carried on otherwise than for the purposes of profit or gain to the individual members; and
- (b) a religious organisation, an organisation of which the principal objects or purposes are charitable or benevolent, an organisation of former members of the defence forces established in every State or a State branch of such an organisation, an organisation approved by the Governor-General for the purposes of the Act, or a local governing body.

An organisation conducted or controlled by, or by persons appointed by, the Government of the Commonwealth or of a State is not eligible for assistance under the Act.

The Director-General of Social Services may make a grant of money to an organisation as assistance towards meeting the cost of the construction or purchase of a home, including land, to be used permanently for the accommodation of aged persons. The grant is made on a basis of \$2 for each \$1 raised by the organisation (\$1 for each \$1 from 1954 to 1957), not counting money which the organisation received from a governmental body (other than a local governing body) or borrowed.

Before a grant is made the Director-General must be satisfied that the sum of the money expended and the money at present available for expenditure by the organisation towards the capital cost of the home, together with the amount of the grant, will be not less than the capital cost of the home.

The following table gives information regarding grants approved during 1970-71. The amounts granted include new grants approved in 1970-71 together with adjustments made during the year in respect of grants originally approved in earlier years.

**AGED PERSONS HOMES: GRANTS AND AMOUNTS APPROVED, AND BEDS PROVIDED, STATES AND TERRITORIES, 1970-71**

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total
Grants approved	No.	57	53	28	48	25	22	..	2	235
Amounts	\$'000	4,250	4,140	1,865	3,827	3,335	1,376	..	179	18,972
Beds provided	No.	894	831	424	864	766	315	..	42	4,136

The following table gives information regarding grants approved for each of the years 1966-67 to 1970-71. The amounts granted in each year include new grants approved in that year together with adjustments made during the year in respect of grants originally approved in earlier years.

**AGED PERSONS HOMES: GRANTS AND AMOUNTS APPROVED, AND BEDS PROVIDED AUSTRALIA 1966-67 TO 1970-71**

Year	Grants approved		Beds provided
	Number	Amount (\$'000)	Number
1966-67	158	11,095	3,227
1967-68	170	10,220	2,831
1968-69	193	12,704	3,342
1969-70	184	13,576	3,305
1970-71	235	18,972	4,136

Since the commencement of the Act in December 1954, 2,270 grants amounting to \$124,970,553 have been approved, and accommodation has been provided for 40,058 aged persons.

On 12 September 1969 the Aged Persons Homes Act was amended to provide a *personal care subsidy* of \$5 a week for persons of eighty years of age or over who receive approved personal care while living in hostel type accommodation provided by organisations eligible under the Aged Persons Homes Act. The following table gives details of the premises approved, payments made and number of residents aged eighty years or over residing in the approved premises, at 30 June 1971.

**AGED PERSONS HOMES GRANTS, PERSONAL CARE SUBSIDY: STATES, 30 JUNE 1971**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number of approved premises	84	99	59	48	32	19	1	1	343
Number of qualified residents	1,304	1,839	1,223	987	505	280	2	2	6,142
Subsidy paid	\$ 423,460	438,000	288,220	242,260	123,260	75,740	480	540	1,591,960

The *Sheltered Employment (Assistance) Act* 1967-1970 superseded the *Disabled Persons Accommodation Act* 1963. Under the latter Act, which was in operation from 25 November 1963 to 30 June 1967, total grants of \$372,118 had been approved. The new Act, which came into operation on 30 June 1967 and was amended on 26 October 1970, provides for subsidies of \$2 for \$1 to eligible organisations towards the capital cost of sheltered workshops, the equipment for them, and accommodation for disabled people employed in sheltered workshops or in normal industry. The Act covers

the erection of buildings and the purchase of existing buildings. In both cases the cost of land is included in the capital cost as is the cost of any necessary conversion or extension of an existing building. The subsidy may also be paid towards the rental, for up to three years, where rented premises are used to provide sheltered employment. A training fee of \$500 is payable to sheltered workshop organisations in respect of each handicapped person who enters and remains in normal employment for twelve months following a period of at least six months training provided by the organisation. In addition, a subsidy of up to \$1 for \$1 is payable towards the salaries of certain sheltered workshop accommodation unit staff (such as supervisory staff, doctors, social workers and counsellors). From 26 October 1970 to 30 June 1971 training fees were approved in respect of 10 handicapped persons at a cost of \$5,000, and 781 positions were subsidised to an annual estimated expenditure of \$639,745. Organisations eligible for grants under the Act are the same as those specified under the Aged Persons Homes Act.

A substantial number of the people employed in the sheltered workshop must be medically qualified for an invalid pension, or be likely to become so qualified if not provided with sheltered employment, and must receive payment for their work before the organisation can qualify for assistance under the Act.

The total subsidy for the 1,397 grants approved during 1970–71 amounted to \$2,257,989. Of these grants, 61 were for workshop buildings and extensions involving a subsidy of \$968,461. The increased number of grants during the year was due mainly to the greater demand for equipment and, to a lesser extent, to the construction and rental of more workshops. The remaining grants and subsidies approved were divided as follows: 526 grants totalling \$407,945 for workshop equipment; 14 in respect of rental of premises used as sheltered workshops, \$19,978; and 5 grants involving \$216,860 for projects providing accommodation for 189 disabled workshop employees.

The *Handicapped Children (Assistance) Act* 1970 came into operation on 17 June 1970. The Act provides for subsidies of \$2 for \$1 to be paid to eligible organisations towards the capital cost of premises to be used for the training of handicapped children; the cost of equipment for such training; and the capital cost of residential accommodation for handicapped children receiving training. Organisations eligible for grants under the Act are the same as those specified under the Aged Persons Homes Act. At 30 June 1971 the subsidy had been extended to 48 premises to be used for training purposes and to 10 residential centres. The total amount approved under the Act by way of grants towards the cost of training centres, residential units and training equipment was \$1,745,530.

The *Delivered Meals Subsidy Act* 1970 came into operation on 15 April 1970. Its purpose is to help organisations to establish, maintain, expand and improve 'meals-on-wheels' services. The subsidy is at the rate of \$1 for every ten meals provided by approved organisations. At 30 June 1971, 282 organisations had received a total subsidy of \$536,516 under the Act. Organisations eligible for grants under the Act are the same as those specified under the Aged Persons Homes Act.

### Commonwealth assistance to States

The *States Grants (Deserted) Wives Act* 1968 came into operation on 21 June 1968 with retrospective effect from 1 January 1968. The Act provides for assistance to be given by the Commonwealth to the States in respect of aid for needy mothers with children where there is no bread-winner and the mothers are not eligible for benefits under the Social Services Act. Broadly, these include deserted wives during the first six months of desertion, wives during the first six months of the husband's imprisonment, deserted de facto wives, de facto wives of prisoners, and unmarried mothers.

The type of assistance attracting a Commonwealth grant may be provided in the form of cash, food or clothing. The grant is made by the Commonwealth to the States on the basis of half the cost of the approved assistance paid to the mother or half the amount of Class A widow's pension, which would have been payable had she been qualified to receive it, whichever is the lesser.

All States are now receiving assistance under the scheme. In 1970–71 payments by the Commonwealth amounted to \$3,691,217 compared with \$1,882,133 during 1969–70.

The *States Grants (Home Care) Act* 1969 provides that the Commonwealth will share with participating States on a \$1 for \$1 basis, the cost of developing approved housekeeping or other domestic assistance provided wholly or mainly for aged persons in their homes. The Commonwealth will also share on a \$1 for \$1 basis with participating States up to a maximum of one-third of the capital cost of approved senior citizens' centres as well as meeting on a \$1 for \$1 basis with the States the cost of a salary of a welfare officer employed by such a centre. All States participate in this scheme.

The following table shows the total payments made to the States to 30 June 1971.



**PAYMENTS TO STATES FOR HOME CARE, SENIOR CITIZENS'  
CENTRES, AND WELFARE OFFICERS TO 30 JUNE 1971**  
(£)

<i>State</i>	<i>Home Care Services</i>	<i>Senior Citizens' Centres</i>	<i>Welfare Officers</i>	<i>Total</i>
New South Wales	234,100	34,449	..	268,549
Victoria	..	..	..	..
Queensland	111,615	17,225	..	128,840
South Australia	..	48,463	3,087	51,550
Western Australia	3,500	..	..	3,500
Tasmania	..	..	..	..
<b>Total</b>	<b>349,215</b>	<b>100,137</b>	<b>3,087</b>	<b>452,439</b>

The *States Grants (Dwellings for Aged Pensioners) Act* 1969 enables the Commonwealth to make grants, amounting to \$25,000,000 over a five-year period commencing from 1 July 1969, to the States for the purpose of carrying out approved building schemes in connection with the provision of self-contained accommodation for single aged pensioners with little means.

**DWELLINGS FOR AGED PENSIONERS: ASSISTANCE TO STATES  
1970-71**  
(£)

<i>State</i>	<i>Grants paid in 1970-71</i>	<i>Total grants paid to 30.6.71</i>	<i>Maximum amount payable under the Act</i>
New South Wales	1,774,125	2,238,972	10,750,000
Victoria	1,929,475	2,129,475	6,500,000
Queensland	108,554	108,554	3,350,000
South Australia	310,700	470,700	2,000,000
Western Australia	700,000	700,000	1,750,000
Tasmania	158,200	258,200	650,000
<b>Total</b>	<b>4,981,054</b>	<b>5,905,901</b>	<b>25,000,000</b>

**Telephone rental concessions**

Effective from 1 October 1964 an amendment to the Telephone Regulations of the Post and Telegraph Act provided that a telephone service for blind persons and for qualified age, invalid and widow pensioners is available at an annual rental equal to two-thirds of the amount otherwise payable. The Department of Social Services re-imburses the Postmaster-General's Department for the cost of the scheme including administrative costs. Expenditure during 1970-71 was \$2,955,337, plus administrative costs amounting to \$75,969.

**Compassionate allowances**

These allowances are paid by the Commonwealth on a discretionary basis to certain people who are unable to qualify for pensions or other benefits under the provisions of the Social Services Act. Expenditure on compassionate allowances and payments of a similar nature during 1970-71 was \$57,283.

**Northern Territory and Australian Capital Territory Welfare Services**

Provision of general Welfare services in these two Territories is the responsibility of the Commonwealth. In so far as Welfare items can be identified for territorial accounting purposes, the following table shows the cost of providing these services for each of the years 1966-67 to 1970-71.

**COMMONWEALTH EXPENDITURE ON GENERAL WELFARE SERVICES(a)  
NORTHERN TERRITORY AND AUSTRALIAN CAPITAL TERRITORY  
1966-67 TO 1970-71  
(\$'000)**

	1966-67	1967-68	1968-69	1969-70	1970-71
<b>Northern Territory—</b>					
<b>Current outlay—</b>					
Net current expenditure on goods and services . . . . .	3,043	3,718	6,605	9,262	7,141
Cash benefits to persons . . . . .	214	249	294	324	388
<i>Total current outlay . . . . .</i>	<i>3,257</i>	<i>3,967</i>	<i>6,899</i>	<i>9,586</i>	<i>7,529</i>
<b>Capital outlay—</b>					
Gross capital formation(b) . . . . .	..	..	1,229	862	333
<i>Total outlay . . . . .</i>	<i>3,257</i>	<i>3,967</i>	<i>8,128</i>	<i>10,448</i>	<i>7,862</i>
<b>Australian Capital Territory—</b>					
<b>Current outlay—</b>					
Net current expenditure on goods and services . . . . .	32	33	36	37	63
Cash benefits to persons . . . . .	225	297	336	186	231
<i>Total current outlay . . . . .</i>	<i>257</i>	<i>330</i>	<i>372</i>	<i>223</i>	<i>294</i>
<b>Capital outlay—</b>					
Gross capital formation(b) . . . . .	36	..	..	..	..
<i>Total outlay . . . . .</i>	<i>293</i>	<i>330</i>	<i>372</i>	<i>223</i>	<i>294</i>

(a) Includes expenditure on aboriginal affairs.

(b) Expenditure on fixed assets and increase in stocks.

**Aboriginal welfare**

The Aboriginal population as defined at the 1966 Census of Population and Housing includes persons who, at the Census, stated themselves to be 'Aboriginal', or who stated themselves to be more than half Aboriginal, or who were half Aboriginal and half European. The number enumerated in this group at the 1966 Census was 80,207 persons. This figure excludes Torres Strait Islanders, persons who stated that they were less than half Aboriginal and persons who are half Aboriginal and half non-European. An independent estimate, which includes each of these categories, made by the Commonwealth Office of Aboriginal Affairs set the total Aboriginal population in 1969 at about 140,000 persons. The Aboriginal population is increasing at a rate faster than the Australian average. Few Aborigines still live a nomadic life; most live a settled, but in many other ways, traditional life. There are others at all stages between this and full participation in the life of the Australian community.

A referendum in May 1967 led to the repeal of Section 127 of the Constitution which provided that in reckoning the numbers for census purposes, Aborigines should not be counted; and to the deletion of the words 'other than the Aboriginal race in any State' from Section 51 (xxvi) which relates to the power of the Commonwealth Parliament to make laws with respect to people of any race. The Federal Government, whose aim is to help the Aborigines to become an integral part of Australian community life, while at the same time preserving and developing their own distinctive culture, languages, traditions and arts now shares with the States power and responsibilities for the advancement of Aborigines. The Commonwealth Government has created an Office of Aboriginal Affairs, in Canberra, as the agency co-ordinating policy affecting Aborigines, as well as continuing its financial and administrative responsibilities for Aborigines in the Northern Territory and Australian Capital Territory through the Department of the Interior. The Office serves a Council, comprising a Chairman and two members, which has two functions: to advise in the framing of national policies for the Aboriginal citizens of Australia; and to consult with Aborigines and with Commonwealth and State Departments and other authorities whose activities have a bearing on Aboriginal welfare.

In recent years the Commonwealth, State and Northern Territory legislatures have been active in progressively removing all discriminatory legislation from the relevant Acts of the Commonwealth and State Parliaments and from the relevant Ordinances of the Northern Territory, and therefore a number of benefits received by Aborigines are no longer readily identifiable. In the legal and formal sense none of the opportunities open to Australians generally is closed to Aborigines. However the States continue to maintain a number of programmes specifically for the welfare and advancement of Aborigines, and since 1968 the Commonwealth Government has increased its involvement following the establishment of the Office of Aboriginal Affairs. Outlays by Commonwealth authorities which have been identified as specifically relating to Aboriginal advancement are shown for 1967-68 to 1970-71 in the following table.

**OUTLAY ON ABORIGINAL ADVANCEMENT BY COMMONWEALTH AUTHORITIES**  
1967-68 TO 1970-71  
(\$'000)

	1967-68	1968-69	1969-70	1970-71
Net current expenditure on goods and services (including grants to private non-profit organisations)—				
Education . . . . .	1,217	1,732	2,056	3,160
Health . . . . .	328	397	389	393
Welfare . . . . .	4,955	5,686	8,445	8,659
Housing . . . . .	35	55	64	154
Other . . . . .	..	298	375	537
<i>Total</i> . . . . .	<i>6,535</i>	<i>8,168</i>	<i>11,329</i>	<i>12,903</i>
Gross capital formation—				
Education . . . . .	966	252	2,610	851
Health . . . . .	230	373	181	104
Welfare . . . . .	545	535	367	706
Housing . . . . .	2	3	197	895
Other . . . . .	..	58	55	57
<i>Total</i> . . . . .	<i>1,743</i>	<i>1,221</i>	<i>3,410</i>	<i>2,613</i>
Cash benefits to persons . . . . .	..	62	735	2,622
Grants for private capital purposes . . . . .	695	938	1,583	2,049
Advances to the private sector . . . . .	..	24	417	725
Commonwealth grants—				
Current—				
Education . . . . .	..	151	289	273
Health . . . . .	..	162	162	290
Welfare . . . . .	..	6	146	237
Capital—				
Education . . . . .	..	656	655	672
Health . . . . .	..	348	474	353
Welfare . . . . .	..	125	140	354
Housing . . . . .	..	2,202	3,545	4,821
Commonwealth advances . . . . .	..	..	350	..
<i>Total outlay</i> . . . . .	<i>8,973</i>	<i>14,063</i>	<i>23,234</i>	<i>27,912</i>

### State expenditure on certain Welfare Services

The following table shows net expenditure from State government funds on certain welfare services. The figures exclude expenditure on unemployment, bush fire, flood, etc., relief, Aboriginal welfare, and some other items which are excluded because information cannot be obtained for all States. Loan fund expenditure is excluded also. Because of differences in organisation and accounting methods, the information shown for some classes is not on exactly the same basis for all States; it may also be incomplete because particulars of some activities are not separately recorded and are therefore excluded. The expenditure shown is 'net' in the sense that receipts for services rendered have been deducted from gross expenditure.



## NET EXPENDITURE BY STATE GOVERNMENTS ON CERTAIN WELFARE SERVICES, 1966-67 TO 1970-71

(\$'000)

<i>Service and year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
1970-71—							
Relief of aged, indigent and infirm, child welfare, etc. . . . .	23,046	17,744	11,551	6,247	8,458	2,635	69,681
Miners' phthisis . . . . .	52	44	..	..	77	..	173
<b>Total . . . . .</b>	<b>23,098</b>	<b>17,788</b>	<b>11,551</b>	<b>6,247</b>	<b>8,535</b>	<b>2,635</b>	<b>69,854</b>
Total—							
1969-70. . . . .	19,903	14,109	11,703	5,265	7,925	2,113	61,018
1968-69. . . . .	18,308	12,981	9,849	4,691	6,583	2,049	54,461
1967-68. . . . .	16,615	11,277	8,849	4,393	5,746	2,020	48,900
1966-67. . . . .	15,329	10,326	7,679	4,229	5,573	1,664	44,800

## Surveys by the Commonwealth Department of Social Services

## Survey of age, invalid and widow pensioners in New South Wales and Victoria, March 1971

A survey of the characteristics of age, invalid and widow pensioners in New South Wales and Victoria, covering approximately two-thirds of all such pensioners in Australia, was carried out by the Commonwealth Department of Social Services in March 1971.

A high degree of consistency between the two States was found in the survey results, the more important of which are shown below.

The ranges of *means as assessed* shown in the tables in this sub-section have been selected having regard to the following:

- pensioners, otherwise qualified, may be paid supplementary assistance at the maximum rate if their means as assessed do not exceed \$52 and at a reduced rate if their means as assessed are between \$52 and \$156;
- pensioners with means as assessed up to \$442 (married) or \$520 (single) qualify for pension at the maximum rate;
- pensioners with means as assessed in the range \$443-\$1,157 (married) or \$521-\$1,326 (single) qualify for pension at a reduced rate and would be eligible for a pension under the means test in operation prior to the introduction of the tapered means test on 27 September 1969;
- pensioners with means as assessed exceeding \$1,157 (married) or \$1,326 (single) qualify for a reduced rate pension solely as a result of the introduction of the tapered means test.

NOTE. In studying the tables, reference should be made to the definition of '*means as assessed*' and the types of means and assets which are disregarded in determining *means as assessed* (see pages 394 and 397).

*Age Pensioners: New South Wales and Victoria, March 1971*

**AGE PENSIONERS BY SEX, AGE, MARITAL STATUS AND MEANS AS ASSESSED  
NEW SOUTH WALES AND VICTORIA, MARCH 1971**  
(Percentage distribution)

Age group (years)	Single (a)							Married (b)							Total
	Means as assessed(\$)(c)							Means as assessed(\$)(c)							
	Nil	1-156	157-520	521-1,326	Over 1,326	Total	Nil	1-156	157-442	443-1,157	Over 1,157	Total			
MALES															
65-69 . . .	0.8	0.5	0.7	0.4	0.1	2.5	1.0	1.8	2.4	1.7	0.6	7.4	9.9		
70-74 . . .	0.9	0.6	0.8	0.4	0.1	2.6	1.0	1.5	2.0	1.0	0.4	5.9	8.5		
75-79 . . .	0.8	0.4	0.6	0.3	0.1	2.2	0.7	0.8	1.0	0.5	0.1	3.2	5.3		
80 and over . . .	1.1	0.6	0.7	0.4	0.1	3.0	0.7	0.6	0.7	0.4	0.1	2.4	5.4		
Total males . . .	3.6	2.1	2.8	1.5	0.4	10.3	3.3	4.6	6.2	3.5	1.2	18.8(d)	29.1		
FEMALES															
60-64 . . .	2.5	1.4	1.9	1.1	0.3	7.3	0.8	1.2	1.7	1.3	0.6	5.7	13.0		
65-69 . . .	3.2	2.0	2.5	1.4	0.4	9.5	1.0	1.6	2.3	1.4	0.5	6.7	16.2		
70-74 . . .	3.7	2.2	2.6	1.6	0.5	10.6	0.8	1.2	1.7	0.9	0.3	4.9	15.5		
75-79 . . .	4.0	2.2	2.2	1.4	0.4	10.2	0.6	0.6	0.9	0.5	0.1	2.7	12.9		
80 and over . . .	5.3	2.6	2.4	1.5	0.3	12.1	0.3	0.3	0.4	0.2	..	1.3	13.3		
Total females . . .	18.8	10.4	11.6	7.0	1.9	49.6	3.5	5.0	7.0	4.3	1.6	21.3(e)	70.9		
PERSONS															
60-64 . . .	2.5	1.4	1.9	1.1	0.3	7.3	0.8	1.2	1.7	1.3	0.6	5.7	13.0		
65-69 . . .	4.0	2.5	3.2	1.8	0.5	12.0	1.9	3.3	4.8	3.1	1.1	14.1	26.1		
70-74 . . .	4.6	2.8	3.3	2.0	0.5	13.2	1.8	2.7	3.7	1.9	0.7	10.8	24.0		
75-79 . . .	4.8	2.6	2.8	1.8	0.5	12.4	1.3	1.4	1.9	1.0	0.2	5.9	18.2		
80 and over . . .	6.4	3.2	3.1	1.9	0.4	15.0	1.0	0.9	1.1	0.6	0.1	3.6	18.7		
Total persons . . .	22.3	12.5	14.4	8.5	2.2	59.9	6.8	9.6	13.2	7.9	2.8	40.1	100.0		

(a) Single comprises never married, widowed, divorced and permanently separated. (b) Of the married pensioners 8.4 per cent of the males and 5.3 per cent of the females were paid at the standard rate. (c) See text, page 411. (d) Includes 16.6 per cent with wife an age pensioner, 0.6 per cent with wife an invalid pensioner and 0.8 per cent with wife receiving wife's allowance. (e) Includes 16.6 per cent with husband an age pensioner, 1.1 per cent with husband an invalid pensioner and 2.6 per cent with husband receiving service pension.

**AGE PENSIONERS BY SEX, MEANS AS ASSESSED, MARITAL STATUS AND  
HOME OWNERSHIP(a): NEW SOUTH WALES AND VICTORIA, MARCH 1971**  
(Percentage distribution)

Means as assessed (c) (\$)	Single (b)				Married				Persons		
	With home		Without home		With home		Without home		With home	Without home	Total
	Males	Females	Males	Females	Males	Females	Males	Females			
Nil . . .	0.9	7.0	2.7	11.7	2.1	2.3	1.2	1.2	12.3	16.8	29.1
1- 52 . . .	0.4	2.5	0.5	2.3	1.4	1.5	0.4	0.4	5.7	3.7	9.4
53- 156 . . .	0.6	3.1	0.6	2.4	2.3	2.5	0.5	0.6	8.5	4.1	12.6
157- 442 . . .	1.5	7.0	1.3	4.6	5.2	5.9	1.0	1.2	19.5	8.1	27.6
157- 520 . . .	0.6	2.4	0.5	1.5	2.5	3.0	0.4	0.5	8.4	2.8	11.2
443- 936 . . .	0.6	2.4	0.5	1.5	2.5	3.0	0.4	0.5	8.4	2.8	11.2
521- 936 . . .	0.6	2.4	0.5	1.5	2.5	3.0	0.4	0.5	8.4	2.8	11.2
937-1157 . . .	0.3	1.9	0.2	1.4	0.6	0.7	0.1	0.1	3.5	1.8	5.3
937-1326 . . .	0.3	1.9	0.2	1.4	0.6	0.7	0.1	0.1	3.5	1.8	5.3
1158-1690 . . .	0.1	0.8	0.1	0.4	0.9	1.1	0.1	0.3	2.8	0.9	3.7
1327-1690 . . .	0.1	0.8	0.1	0.4	0.9	1.1	0.1	0.3	2.8	0.9	3.7
Over 1690 . . .	0.1	0.4	0.1	0.2	0.1	0.2	..	..	0.8	0.3	1.1
Total . . .	4.3	25.2	6.0	24.5	15.0	17.0	3.8	4.3	61.5	38.5	100.0

(a) For the purposes of the survey, a pensioner was regarded as a home owner if he or his spouse owned or partly owned or had an interest in the home in which he or she lived. Where a married couple, both pensioners, lived in a home owned by one or both of them, each was regarded as a home owner. (b) Single comprises never married, widowed, divorced and permanently separated. (c) See text, page 411.

*Invalid Pensioners: New South Wales and Victoria, March 1971*INVALID PENSIONERS BY SEX, AGE, MARITAL STATUS AND MEANS AS ASSESSED  
NEW SOUTH WALES AND VICTORIA, MARCH 1971  
(Percentage distribution)

Age group (years)	Single (a)						Married (b)							Total
	Means as assessed\$(c)						Means as assessed\$(c)							
	Nil	1-156	157-520	521-1,326	Over 1,326	Total	Nil	1-156	157-442	443-1,157	Over 1,157	Total		
MALES														
16-19	.	2.1	0.3	0.1	..	2.4	..	..	..	..	..	..	2.4	
20-24	.	2.4	0.5	0.2	..	3.2	0.1	..	..	..	..	0.1	3.3	
25-29	.	1.8	0.3	0.2	..	2.4	0.2	..	..	..	..	0.2	2.6	
30-34	.	1.5	0.2	0.2	..	1.9	0.3	..	..	0.1	..	0.4	2.3	
35-39	.	1.6	0.2	0.2	..	2.0	0.5	0.1	0.1	0.1	..	0.7	2.6	
40-44	.	2.1	0.3	0.2	0.1	2.7	0.8	0.1	0.1	0.2	..	1.3	3.9	
45-49	.	2.2	0.3	0.3	0.1	2.9	1.0	0.2	0.2	0.4	0.1	1.8	4.7	
50-54	.	2.4	0.4	0.3	0.2	3.3	1.2	0.4	0.4	0.5	0.1	2.6	5.9	
55-59	.	3.0	0.6	0.5	0.3	4.4	1.9	0.9	0.9	0.9	0.3	4.9	9.3	
60-64	.	3.4	0.9	0.9	0.4	5.7	3.0	1.9	2.2	1.9	0.4	9.3	15.1	
65 and over	.	0.7	0.2	0.2	0.1	1.2	0.8	0.6	0.7	0.3	..	2.5	3.6	
Total males	.	23.0	4.3	3.1	1.3	0.3	32.0	9.7	4.2	4.6	4.3	1.0	23.8(d)	55.9
FEMALES														
16-19	.	2.0	0.1	0.1	..	2.2	..	..	..	..	..	..	2.2	
20-24	.	2.4	0.3	0.1	..	2.9	0.1	..	..	..	..	0.2	3.1	
25-29	.	1.8	0.2	0.1	..	2.2	0.1	..	..	0.1	..	0.2	2.4	
30-34	.	1.4	0.2	0.1	0.1	1.8	0.1	..	..	0.1	0.1	0.3	2.1	
35-39	.	1.5	0.2	0.2	..	1.9	0.2	..	..	0.1	0.1	0.3	2.2	
40-44	.	2.0	0.4	0.2	0.1	2.7	0.3	..	0.1	0.1	0.1	0.6	3.3	
45-49	.	2.8	0.6	0.5	0.2	4.2	0.4	0.1	0.1	0.2	0.1	1.0	5.1	
50-54	.	3.4	0.9	0.7	0.4	5.4	0.8	0.4	0.4	0.3	0.2	1.9	7.4	
55-59	.	4.8	1.4	1.2	0.7	8.1	1.4	1.2	1.2	0.7	0.3	4.9	13.0	
60-64	.	0.5	0.2	0.2	0.1	1.1	0.4	0.3	0.3	0.1	..	1.2	2.3	
65 and over	.	0.4	0.1	0.1	..	0.6	0.2	0.1	0.1	..	..	0.4	1.1	
Total females	.	23.0	4.7	3.6	1.6	0.3	33.2	4.0	2.3	2.2	1.5	1.0	11.0(e)	44.2
PERSONS														
16-19	.	4.0	0.4	0.1	..	4.6	..	..	..	..	..	..	4.7	
20-24	.	4.8	0.8	0.4	..	6.0	0.2	..	..	..	0.1	0.3	6.3	
25-29	.	3.6	0.6	0.3	0.1	4.6	0.3	..	..	0.1	..	0.4	5.0	
30-34	.	2.9	0.5	0.3	0.1	3.8	0.4	0.1	0.1	0.1	0.1	0.7	4.4	
35-39	.	3.0	0.4	0.3	0.1	3.9	0.6	0.1	0.1	0.1	0.1	1.0	4.9	
40-44	.	4.1	0.7	0.4	0.2	5.4	1.1	0.2	0.2	0.3	0.1	1.8	7.2	
45-49	.	4.9	0.9	0.8	0.4	7.1	1.4	0.3	0.3	0.5	0.2	2.8	9.8	
50-54	.	5.8	1.3	1.1	0.6	8.8	2.0	0.8	0.8	0.8	0.3	4.6	13.3	
55-59	.	7.8	2.0	1.7	0.9	12.6	3.4	2.1	2.1	1.7	0.6	9.8	22.3	
60-64	.	4.0	1.2	1.1	0.5	6.8	3.3	2.2	2.6	2.0	0.5	10.5	17.3	
65 and over	.	1.1	0.3	0.3	0.1	1.8	1.0	0.7	0.8	0.3	..	2.9	4.7	
Total persons	.	46.0	9.0	6.7	3.0	0.6	65.2	13.7	6.4	6.9	5.8	2.0	34.8	100.0

(a) Single comprises never married, widowed, divorced and permanently separated. (b) Of the married pensioners 56.7 per cent of the males and 23.6 per cent of the females were paid at the standard rate. (c) See text, page 411.  
 (d) Includes 4.1 per cent with wife an invalid pensioner, 6.2 per cent with wife an age pensioner and 11.7 per cent with wife receiving wife's allowance. (e) Includes 4.1 per cent with husband an invalid pensioner, 3.7 per cent with husband an age pensioner and 0.6 per cent with husband receiving service pension.



**INVALID PENSIONERS BY SEX, MEANS AS ASSESSED, MARITAL STATUS  
AND HOME OWNERSHIP(a): NEW SOUTH WALES AND VICTORIA, MARCH 1971**

(Percentage distribution)

Means as assessed (c) (\$)	Single (b)				Married				Persons		
	With home		Without home		With home		Without home		With home	Without home	Total
	Males	Females	Males	Females	Males	Females	Males	Females			
Nil		1.2	2.4	21.8	20.6	4.3	1.7	5.4	2.4	9.6	59.7
1- 52		0.2	0.5	1.9	1.8	1.2	0.6	0.6	0.2	2.6	7.1
53- 156		0.4	0.6	1.8	1.8	1.8	1.0	0.6	0.4	3.7	8.3
157- 442											
157- 520		0.8	1.2	2.4	2.4	3.6	1.6	1.1	0.6	7.2	13.6
443- 936											
521- 936		0.3	0.4	0.7	0.6	2.4	0.8	0.8	0.3	3.8	6.1
937-1,157											
937-1,326		0.1	0.4	0.2	0.4	0.8	0.2	0.3	0.2	1.5	2.6
1,158-1,690											
1,327-1,690		0.1	0.1	0.1	0.1	0.7	0.5	0.3	0.3	1.4	2.1
Over 1,690		..	..	0.1	0.1	0.1	0.1	..	0.1	0.3	0.5
Total	3.1	5.6	29.0	27.6	14.8	6.5	9.0	4.5	29.9	70.1	100.0

(a) For the purposes of the survey, a pensioner was regarded as a home owner if he or his spouse owned or partly owned or had an interest in the home in which he or she lived. Where a married couple, both pensioners, lived in a home owned by one or both of them, each was regarded as a home owner. (b) Single comprises never married, widowed, divorced and permanently separated. (c) See text, page 411.

*Widow Pensioners: New South Wales and Victoria, March 1971*

**WIDOW PENSIONERS (CLASS A), BY AGE AND MEANS AS ASSESSED  
NEW SOUTH WALES AND VICTORIA, MARCH 1971**

(Percentage distribution)

Age group (years)	Means as assessed (\$) (a)								
	Nil	1-52	53-156	157-520	521-936	937-1,326	1,327-1,690	Over 1,690	Total
16-19	0.3	0.0	..	..	0.1	..	..	..	0.4
20-24	4.4	..	0.1	0.7	0.6	0.2	0.1	0.3	6.5
25-29	7.4	..	0.3	1.2	1.2	0.4	0.2	0.7	11.4
30-34	8.5	0.1	0.3	1.7	1.2	0.6	0.4	1.1	13.7
35-39	9.6	0.1	0.4	1.8	1.2	0.7	0.6	1.3	15.6
40-44	11.4	0.2	0.4	2.2	1.3	0.7	0.5	1.2	17.8
45-49	10.4	0.2	0.5	2.2	1.2	0.7	0.5	1.1	16.7
50-54	7.3	0.2	0.3	1.4	0.8	0.4	0.3	0.6	11.2
55-59	3.7	0.1	0.2	0.8	0.4	0.2	0.1	0.3	5.7
60 and over	0.5	..	..	0.2	0.1	..	..	..	0.9
Total	63.4	1.1	2.5	12.1	8.0	3.8	2.7	6.4	100.0

(a) See text, page 411.

**WIDOW PENSIONERS (CLASS A), BY MEANS AS ASSESSED, CATEGORY, AND  
HOME OWNERSHIP(a): NEW SOUTH WALES AND VICTORIA, MARCH 1971**

(Percentage distribution)

Means as assessed (c) (\$)	Category							
	Widow		Deserted wife		Other (b)		Total	
	With home	Without home	With home	Without home	With home	Without home	With home	Without home
Nil	17.9	14.4	2.4	22.1	1.2	5.3	21.6	41.8
1- 52	0.4	0.2		0.4		0.1	0.4	0.6
53- 156	0.7	0.3	0.1	0.8	0.2	0.4	1.0	1.6
157- 520	3.8	1.6	0.8	4.2	0.4	1.2	5.1	7.0
521- 936	1.9	0.7	0.9	3.4	0.3	0.7	3.1	4.9
937-1,326	1.2	0.5	0.4	1.2	0.2	0.3	1.8	2.0
1,327-1,690	0.9	0.3	0.4	0.8	0.1	0.2	1.4	1.3
Over 1,690	1.9	0.7	0.6	1.8	0.5	0.9	3.0	3.4
Total	28.8	18.7	5.7	34.8	2.9	9.1	37.4	62.6

(a) For the purposes of the survey, a pensioner was regarded as a home owner if she owned or partly owned or had an interest in the home in which she lived. (b) Includes divorcees, dependent females, and women whose husbands are in a mental hospital or a prison. (c) See text, page 411.

WIDOW PENSIONERS (CLASS A), BY MEANS AS ASSESSED, CATEGORY, AND NUMBER OF  
DEPENDENT CHILDREN: NEW SOUTH WALES AND VICTORIA, MARCH 1971  
(Percentage distribution)

Means as assessed (b) (\$)	Category															
	Widow				Deserted wife				Other (a)				Total			
	Widow pensioners according to number of dependant children															
	1	2	3 or more	Total	1	2	3 or more	Total	1	2	3 or more	Total	1	2	3 or more	Total
Nil	15.0	9.1	8.3	32.3	7.9	8.0	8.7	24.6	2.8	1.9	1.8	6.5	25.7	19.0	18.8	63.4
1- 52 . . .	0.3	0.2		0.5	0.2	0.1	0.1	0.4	0.1			0.2	0.7	0.2	0.2	1.1
53- 156 . . .	0.7	0.2	0.1	1.0	0.4	0.3	0.2	0.9	0.4	0.2		0.6	1.4	0.7	0.4	2.5
157- 520 . . .	3.0	1.3	1.1	5.4	1.7	1.6	1.8	5.1	0.8	0.5	0.3	1.6	5.3	3.4	3.2	12.1
521- 936 . . .	1.4	0.7	0.6	2.6	1.5	1.5	1.4	4.3	0.4	0.4	0.2	1.0	3.3	2.5	2.2	8.0
937-1,326 . . .	0.8	0.5	0.4	1.7	0.6	0.6	0.5	1.7	0.2	0.2	0.1	0.5	1.5	1.3	1.0	3.8
1,327-1,690 . . .	0.6	0.4	0.3	1.3	0.4	0.4	0.3	1.2	0.2	0.1	0.1	0.3	1.2	0.9	0.7	2.7
Over 1690 . . .	1.2	0.8	0.6	2.7	0.9	0.8	0.7	2.4	0.6	0.5	0.3	1.4	2.7	2.1	1.6	6.4
Total	22.9	13.2	11.4	47.5	13.5	13.3	13.7	40.5	5.6	3.7	2.9	12.1	42.0	30.1	27.9(c)	100.0

(a) Includes divorcees, dependent females and women whose husbands are in a mental hospital or a prison. (b) See text, page 411.  
(c) Includes 16.0 per cent with three children, 7.3 per cent with four children and 4.6 per cent with five or more children.

WIDOW PENSIONERS (CLASS B), BY AGE AND MEANS AS ASSESSED  
NEW SOUTH WALES AND VICTORIA, MARCH 1971  
(Percentage distribution)

Age group (years)	Means as assessed (\$) (a)								
	Nil	1-52	53-156	157-520	521-936	937-1,326	1,327-1,690	Over 1,690	Total
45-49 . . .	1.7	0.2	0.3	0.9	0.2	0.1	..	..	3.5
50-54 . . .	9.8	1.7	2.2	5.8	1.9	1.1	0.6	0.3	23.3
55-59 . . .	20.9	4.1	5.7	15.0	4.7	2.1	1.0	0.5	54.0
60 and over . . .	7.2	0.5	0.5	8.1	2.3	0.5	0.2	0.1	19.2
Total	39.5	6.5	8.7	29.7	9.1	3.7	1.8	0.9	100.0

(a) See text, page 411.

WIDOW PENSIONERS (CLASS B), BY MEANS AS ASSESSED, CATEGORY AND  
HOME OWNERSHIP(a): NEW SOUTH WALES AND VICTORIA, MARCH 1971  
(Percentage distribution)

Means as assessed (c) (\$)	Category							
	Widow		Deserted wife		Other (b)		Total	
	With home	Without home	With home	Without home	With home	Without home	With home	Without home
Nil	11.3	19.0	0.8	3.8	1.1	3.4	13.3	26.3
1- 52 . . .	3.0	2.3	0.2	0.3	0.3	0.4	3.5	3.0
53- 156 . . .	4.8	2.6	0.2	0.5	0.2	0.5	5.2	3.5
157- 520 . . .	14.6	11.1	0.6	1.4	0.8	1.2	16.0	13.7
521- 936 . . .	5.0	2.5	0.3	0.5	0.4	0.4	5.6	3.5
937-1 326 . . .	2.2	0.9	0.1	0.2	0.1	0.2	2.5	1.2
1,327-1,690 . . .	1.1	0.4	..	0.1	0.1	0.1	1.2	0.6
Over 1,690 . . .	0.5	0.2	..	..	..	0.1	0.5	0.4
Total	42.5	39.0	2.3	6.8	3.0	6.3	47.8	52.2
								100.0

(a) For the purposes of the survey, a pensioner was regarded as a home owner if she owned or partly owned or had an interest in the home in which she lived. (b) Includes divorcees, dependent females and women whose husbands are in a mental hospital or a prison. (c) See text, page 411.

Morbidity surveys of invalid pensioners in New South Wales and Victoria

During 1970 two separate surveys of the major disabilities of invalid pensioners in New South Wales and Victoria were undertaken by the Commonwealth Department of Social Services. The first related to all invalid pensioners aged 16-20 years on 30 June 1970. The second survey covered a 15 per cent sample of adults receiving an invalid pension on 9 November 1970. The major causes of disability as disclosed by these surveys are set out in the following tables.

**INVALID PENSIONERS AGED 16-20 YEARS IN NEW  
SOUTH WALES AND VICTORIA BY SELECTED MAJOR  
CAUSE OF DISABILITY, JUNE 1970**

<i>Major cause of disability</i>	<i>Number</i>	<i>Percentage distribution</i>
Mental retardation . . . . .	3,286	60.6
Mental (other) . . . . .	241	4.4
Blindness . . . . .	189	3.5
Deafness . . . . .	45	0.8
Epilepsy . . . . .	263	4.9
Spasticity/cerebral palsy . . . . .	284	5.2
Other physical disabilities . . . . .	1,000	18.5
Ill-defined injury . . . . .	37	0.7
Not stated . . . . .	74	1.4
<b>Total . . . . .</b>	<b>5,419</b>	<b>100.0</b>

**INVALID PENSIONERS AGED 21 YEARS AND ABOVE IN NEW SOUTH WALES AND VICTORIA  
BY SELECTED GROUPS OF MAJOR CAUSE OF DISABILITY, NOVEMBER 1970**  
(Percentage distribution)

<i>Major cause of disability</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
<b>Mental disorders—</b>			
Psychoses . . . . .	5.8	6.4	6.1
Neuroses . . . . .	4.7	8.4	6.3
Mental retardation . . . . .	13.8	15.5	14.5
Other mental disorders . . . . .	2.1	1.5	1.8
<b>Total . . . . .</b>	<b>26.5</b>	<b>31.9</b>	<b>28.8</b>
<b>Diseases of nervous system and sense organs—</b>			
Diseases of central nervous system (including epilepsy) . . . . .	8.0	8.0	8.0
Diseases and conditions of eye (including blindness) . . . . .	2.6	2.3	2.5
Diseases of ear (including deafness) . . . . .	0.5	0.7	0.6
Other diseases of nervous system . . . . .	0.5	0.4	0.4
<b>Total . . . . .</b>	<b>11.6</b>	<b>11.3</b>	<b>11.5</b>
<b>Diseases of circulatory system—</b>			
Hypertensive disease . . . . .	4.5	8.9	6.4
Ischaemic heart disease . . . . .	6.5	3.1	5.0
Other forms of heart disease . . . . .	2.9	2.3	2.7
Cerebrovascular disease . . . . .	2.9	1.4	2.3
Arteriosclerosis . . . . .	1.3	0.7	1.0
Other diseases of circulatory system . . . . .	1.9	2.1	1.9
<b>Total . . . . .</b>	<b>20.1</b>	<b>18.5</b>	<b>19.4</b>
<b>Diseases of respiratory system—</b>			
Bronchitis . . . . .	3.8	1.5	2.8
Asthma . . . . .	1.5	2.0	1.7
Other diseases of respiratory system . . . . .	3.2	0.7	2.1
<b>Total . . . . .</b>	<b>8.5</b>	<b>4.3</b>	<b>6.7</b>
<b>Diseases of musculoskeletal system—</b>			
Arthritis . . . . .	7.2	8.9	8.0
Rheumatism . . . . .	0.2	0.2	0.2
Displacement of intervertebral disc . . . . .	1.6	0.7	1.2
Other diseases of musculoskeletal system . . . . .	1.4	1.1	1.3
<b>Total . . . . .</b>	<b>10.5</b>	<b>11.0</b>	<b>10.7</b>
<b>Other causes of disability (a) . . . . .</b>	<b>22.8</b>	<b>23.1</b>	<b>22.9</b>
<b>Total . . . . .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) The classification of 'other causes of disability' includes the following items: Infective and parasitic diseases, neoplasms, endocrine, nutritional and metabolic diseases, diseases of blood and blood-forming organs, diseases of digestive system, diseases of genito-urinary system, diseases of the skin, congenital anomalies, symptoms referable to systems and organs, nervousness and debility, and accidents, poisonings and violence.



### The role of voluntary agencies in Australian social welfare

Voluntary agencies have played an important role in the provision of social welfare services in Australia since the earliest days of settlement. The oldest voluntary organisation in Australia is the Benevolent Society of New South Wales, founded in 1818, 'to relieve the poor, the distressed, the aged and the infirm'. During the 19th century voluntary agencies were active in all States providing homes for orphan and abandoned children; industrial schools for older boys and girls often rescued from total destitution in the streets; relief in food and clothing for widows, old people and families of the unemployed; hospitals for the sick poor; and institutions for the aged and invalid.

Although in this century Commonwealth and State Governments have taken over many tasks formerly carried out by voluntary agencies, this has not led to any diminution in voluntary activity. The voluntary sector is probably more active today than it has ever been, not only carrying out its traditional role, but in opening up new fields of activity.

In caring for the aged, voluntary agencies are providing nursing home beds in 320 nursing homes. Accommodation for aged persons is provided, under the Aged Persons Homes Act, in hostels, aged persons homes and retirement villages, the great majority of which are run by voluntary agencies of various kinds.

In addition to the provision of residential care, voluntary agencies are concerned with providing many domiciliary services to enable the aged to remain independent as long as possible, and this is an area of increasing activity.

In 1971 voluntary agencies provided 1.9 million meals to aged and invalid persons in their own homes or at senior citizens centres. Home nursing services are provided in many areas together with home help services to assist the frail aged. Some voluntary agencies also operate friendly visiting services to alleviate the loneliness of the aged and to ensure that their needs are known, and others assist with services in senior citizens clubs.

The same pattern of activity is seen in services for the mentally and physically handicapped. Voluntary agencies provide day and residential schools for handicapped children, sheltered workshops for those able to undertake some employment and hostels for the handicapped in both sheltered and open employment. Many organisations provide home visiting services and occupational therapy for the home-bound, special training centres for various forms of rehabilitation, and recreational programmes for those unable to participate in general community activities. The handicapped field is also noted for its activities in bringing together self help groups of the handicapped and their families to promote the well being of the handicapped and to encourage study and research into both prevention and rehabilitation.

Both the aged and handicapped services receive various forms of assistance from Governments in developing their services.

Besides the various forms of health services described above, many major hospitals are provided by the voluntary sector. Of 1,089 approved hospitals in Australia, 156 or almost 15 per cent are run by voluntary organisations. Such hospitals cover a wide range of needs and in addition provide nursing training which may ultimately be of service to the full range of hospitals and nursing homes.

Family and child welfare has long been an important area for voluntary activity. Children's homes provide for children deprived of normal home life because of serious problems within the family, in a wide variety of units ranging from the small family group home in an ordinary house in the suburbs, to the large unit of cottage homes grouped together. As with other services, recent years have shown a marked emphasis on preventive services through family welfare agencies and to greater use of substitute families in adoption and foster care programmes.

Within the modern family welfare agency, assistance is given not only with money and food, as in the last century, but with marriage guidance, parental counselling and home-maker services, all designed to keep the family together as a unit. Other voluntary agencies run services for the single mother or provide day-care services to assist working mothers, in particular the one parent family or the family under special strain.

The well-being of Australian youth is also a matter of concern to the voluntary sector which runs youth activities of many varieties, offers adolescent counselling services and is showing a growing concern for the seriously emotionally disturbed and those becoming addicted to drugs.

As well as these general community services, special services for Aborigines have been a feature of voluntary activity. Formerly these were mainly concerned with the mission area but of late many agencies have been formed, often run primarily by Aborigines, to assist urban dwellers. Legal aid services, head start programmes, nutrition programmes and many others are now being made available through voluntary effort.

The care of migrants is also a significant activity and again much of this work is now undertaken by settled migrants in conjunction with longer established Australians.

Prisoners and ex-prisoners also receive their share of attention. Organisations exist to visit prisoners and assist their families. These will also assist prisoners on discharge, to re-settle in the community, either at home, in lodgings or in hostels provided by the agency. Other agencies concern themselves with alcoholics, homeless men and women and others temporarily destitute.

The list of activities by no means covers all the work done by the voluntary sector. New and experimental services such as Lifeline and Samaritans, drug contact centres, drop-in coffee houses, street workers for alienated youth and many others, are evidence of the continued ability of the voluntary sector of social welfare to develop and meet new social needs.

Studies of social needs and of the quality and the adequacy of present services are a continuing concern of the voluntary sector which has joined together with the statutory sector in Councils of Social Service at the State and the National level to promote the well-being of the deprived and disadvantaged sections of the community and the general social development of Australia.

## CHAPTER 14

### PUBLIC HEALTH

This chapter is concerned with the activities of the Commonwealth Department of Health (including quarantine, national health benefits, and Commonwealth grants for health purposes); activities of the State health departments; statistics of hospitals and nursing homes, hansenide hospitals, and mental health institutions; statistics of notifiable diseases; and cremations. Statistics relating to causes of death are presented in Chapter 8, *Vital Statistics* (pages 184–7).

Further information about the administration of public health services is contained in the annual reports of the Commonwealth Director-General of Health; the annual reports of the State health authorities; and in the Year Books and Statistical Registers published by the State offices of the Bureau of Census and Statistics. For more detailed statistics of in-patient institutions, see the Bureau of Census and Statistics annual bulletin *Hospitals and Nursing Homes* (Reference No. 16.1).

#### COMMONWEALTH GOVERNMENT ACTIVITIES

At the time of federation the only health function given to the Commonwealth Government under the Constitution was the power to make laws with respect to quarantine. Following on the passing of the *Quarantine Act* 1908 a branch of the Department of Trade and Customs, under the control of a Director of Quarantine, was created on 1 July 1909. The Commonwealth Department of Health was formed in 1921 by the extension and development of the quarantine service, the Director of Quarantine becoming the Director-General of Health. An amendment to the Constitution in 1946 gave the Commonwealth power to make laws with respect to pharmaceutical, hospital and sickness benefits, and medical and dental services. In addition, the Commonwealth Government has used its powers under Section 96 of the Constitution to make grants to the States for health purposes. The Commonwealth Government also gives financial assistance to certain organisations concerned with public health matters. A number of Commonwealth health organisations have been established; detailed information on the functions and operations of these organisations is given in Year Book No. 53, pages 561–6, and in the annual reports of the Commonwealth Director-General of Health.

#### Quarantine

The *Quarantine Act* 1908–1969 is administered by the Commonwealth Department of Health and has three sections of disease control, as follows: (i) human quarantine, which ensures that persons arriving from overseas are free of quarantinable disease; (ii) animal quarantine, which controls the importation of animals and animal products from overseas and the security of other animals present on vessels in Australian ports; and (iii) plant quarantine, which regulates the conditions of importation of all plants and plant products with the object of excluding plant diseases, insect pests and weeds.

In respect of interstate movements of animals and plants, the Act becomes operative only if the Governor-General considers that Commonwealth action is necessary for the protection of any State or States, and in general the administration of interstate movements of animals and plants is left in the hands of the States.

##### Human quarantine

With a few exceptions, which concern persons who have spent at least 14 days in areas adjacent to Australia (e.g. New Zealand, Papua New Guinea, Fiji and Lord Howe Island) all passengers and crews arriving in Australia from overseas, whether by air or sea, are subject to medical inspection for the purpose of preventing the introduction of disease into Australia. At the major ports full-time quarantine officers carry out the work, but in the minor ports local doctors act as part-time quarantine officers. Quarantine activities are controlled by the Commonwealth Directors of Health in each State who are senior medical officers of the Commonwealth Department of Health.



The main concern of the examining officers is to detect cases of the quarantinable diseases smallpox, cholera, yellow fever, plague, and typhus fever. These diseases are not endemic to Australia and it is of great importance to prevent their entry. Quarantine stations at the major ports and at Darwin and Townsville are kept ready for occupation at all times. In addition, persons arriving in Australia and suffering from infectious diseases such as chicken-pox, mumps, scarlet fever, and measles are directed to appropriate care and placed in isolation where necessary.

Valid International Certificates of Vaccination are required of travellers to Australia as follows:

*Smallpox.* All arrivals from all countries except American Samoa, Antarctic Territories, Christmas (Indian Ocean), Cocos (Keeling) and Cook Islands, Fiji, French Polynesia, Gilbert and Ellice Islands Colony (including Ocean and Fanning Islands), Hawaii, Lord Howe Island, Nauru, New Caledonia, New Hebrides, New Zealand, Niue and Norfolk Islands, Papua New Guinea, Solomon and Tokelau Islands, Tonga, Western Samoa, provided travellers have not been outside these areas for at least fourteen days before arrival and that these areas are free from smallpox. Australia reserves the right, in respect of arrivals from other countries, to isolate any person who arrives by air without a smallpox vaccination certificate and refuses to be vaccinated. Children under one year of age are exempt. For passengers arriving in Australia by sea, exemption is granted to infants under twelve months of age and to persons who hold religious convictions against vaccination or who are suffering from a medical condition certified by a medical practitioner to contra-indicate smallpox vaccination.

*Cholera.* All arrivals from countries with locally infected areas. No certificate is required in respect of children under one year of age.

*Yellow fever.* All arrivals from yellow fever endemic zones.

All passengers, whether they arrive by sea or air, are required to give their intended place of residence in Australia, so that they may be traced if a case of disease occurs among the passengers on the aircraft or ship by which they travelled to Australia.

*Isolation.* Under the Quarantine Act, airline and shipping operators are responsible for the expenses of isolation of all travellers who disembark either (i) having been in a country with locally infected areas, within 5 days of arrival and not possessing a cholera vaccination certificate; or (ii) having been in an endemic zone within 6 days of arrival and not possessing a yellow fever vaccination certificate; or (iii) having arrived by air without a smallpox vaccination certificate and refusing to be vaccinated on arrival.

The numbers of cases of infectious (non-quarantinable) diseases which were discovered among the passengers and crew of overseas vessels and aircraft calling at Australian ports during 1970-71 and during the preceding four years are shown in the following tables.

**HUMAN QUARANTINE: CASES OF INFECTIOUS  
(NON-QUARANTINABLE) DISEASES ON OVERSEAS  
VESSELS AND AIRCRAFT CALLING AT  
AUSTRALIAN PORTS 1970-71**

<i>Disease</i>	<i>Total number of cases of infectious disease</i>
Chicken-pox . . . . .	54
Gastro-enteritis . . . . .	1
Glandular fever . . . . .	2
Hansen's disease . . . . .	1
Herpes . . . . .	1
Infectious dermatitis . . . . .	1
Infectious hepatitis . . . . .	22
Influenza . . . . .	5
Measles . . . . .	223
Mumps . . . . .	23
Rubella . . . . .	9
Tuberculosis . . . . .	2
Venereal disease . . . . .	218
<b>Total . . . . .</b>	<b>562</b>

**HUMAN QUARANTINE: OVERSEAS VESSELS AND AIRCRAFT ARRIVING  
IN AUSTRALIA AND CASES OF INFECTIOUS (NON-QUARANTINABLE)  
DISEASES FOUND, 1966-67 TO 1970-71**

Year	Number of overseas vessels and aircraft cleared		Number of overseas vessels and aircraft on which cases were found	Number of cases of infectious disease	
	Ships	Aircraft		Passengers	Crew
1966-67 . . .	4,040	3,918	246	523	172
1967-68 . . .	4,440	4,968	238	312	289
1968-69 . . .	4,813	5,896	184	272	249
1969-70 . . .	5,297	6,887	n.a.	840	
1970-71 . . .	6,233	8,127	n.a.	562	

The provisions of the State Health Acts with regard to the compulsory notification of infectious diseases and statistics of cases notified in 1971 are dealt with on pages 442-3 of this chapter.

### Animal quarantine

Animal quarantine, authorised by the provisions of the *Quarantine Act* 1908-1969, aims at preventing the introduction or spread of animal diseases. It covers the importation of all animals, raw animal products and biological cultures associated with animal diseases, and goods associated with animals.

Of the domesticated animals, only horses, dogs, cats, and poultry are admitted from a limited number of countries depending on diseases being absent in the country of origin. All must be accompanied by health certificates which may include prescribed tests. Dogs and cats, except those from New Zealand, are subject to quarantine detention on arrival in Australia. Zoological specimens are imported into registered zoos, where they remain in permanent quarantine. Circuses are also registered if exotic species of animals are kept. In a similar manner, animals for scientific purposes are imported to approved laboratories. All these premises are kept under constant surveillance. Raw animal products such as hair, types of wool, skins, and hides are specially treated under quarantine control. Such items as raw meat and eggs, which cannot be sterilised, are admitted only from New Zealand. Other items may be treated to destroy any possible infection. Special attention is given to the importation of biological substances of animal origin. The Animal Quarantine Service is also responsible for the health certification of animals for export overseas in accordance with the requirements of the various countries.

The Division of Animal Quarantine was created in 1926. The central administration is situated within the Health Department in Canberra, with an Assistant Director-General and veterinary officers. The Principal Veterinary Officer of the Department of Agriculture in each State is appointed Chief Quarantine Officer (Animals) of that State, and members of his staff Quarantine Officers (Animals). These State officers carry out the quarantine policy formulated by the central administration. Quarantine accommodation is provided in permanent animal quarantine stations at each State capital.

The Division participates in world-wide international notifications of the more serious contagious diseases of animals and maintains a register of such diseases throughout the world. Information regarding animal diseases and parasites in Australia is also collected and disseminated by means of service publications. Consultation on technical matters is maintained with various scientific institutions. In matters of policy and the quarantine control of imports there is a close liaison with the Department of Customs and Excise.

The Division collaborates with the General and Plant Divisions of the quarantine service. Many diseases of animals are communicable to man, and for this reason animal and general quarantine administration are in some respects inseparable. Similarly the interests of animal and plant divisions overlap, many items such as insects, fodder and straw being the subject of combined control.

### Plant quarantine

Australia is free of many of the pests and diseases of agriculture which occur in other parts of the world. Since 1 July 1909 the importation into Australia of plant materials has been subject to an increasingly stringent quarantine; some materials are admitted only under certain conditions while others are prohibited altogether. The quarantines are designed to keep out of the country any additional pests and diseases which, while not a danger in their natural habitat, may thrive in the Australian environment and, if introduced, bring about serious economic losses to Australian agriculture.

The quarantine of plants and plant material entering Australia is the responsibility of the Federal Government; the State Governments provide co-operation in the operation of the plant quarantine service. The movement of specified fruits and other plant materials within Australia is the responsibility of the State Governments.

The Commonwealth regulations governing plant quarantine apply to all plants or parts of plants, whether living or dead, and include seeds and fruits as well as timber, soil, living insects, cultures of organisms, containers, machinery, vehicles, furniture, packing materials and some foods, toys, sporting goods or tools of trade. All such goods must be declared whether they are imported as commercial consignments or as personal effects, curios, souvenirs and unprocessed food carried in luggage or on the persons of tourists, immigrants or other travellers. Heavy penalties are laid down for evasion of the regulations.

Under the *Quarantine Act* 1908-1969, quarantine inspectors are required to examine all plant material at the first port of entry and to release only material which is not considered to be a danger to agriculture or for which prior approval to import has been obtained. Any material found to be carrying diseases or pests, or suspected of doing so, may be ordered into quarantine for remedial treatment, the cost of which is met by the importer. All bamboo, cane and rattan articles are automatically fumigated. Destruction may be ordered where treatment or return to sender is impracticable, or no prior approval has been obtained, or the goods are prohibited imports.

Certain material, such as nursery stock and some seeds, may be imported only with special permission, and then in small quantities sufficient merely to establish a variety or strain. Arrangements must be made for this material to be grown in post-entry quarantine in Australia at a nursery registered by the Australian authorities. Application to import goods of this nature must be lodged in advance with the Chief Quarantine Officer (Plants) of the State Department of Agriculture in the capital city of the State of destination or with the Director of Quarantine in Canberra. Other restricted seeds or materials of plant origin for use as human or animal food or for manufacturing purposes, may have to be processed under quarantine supervision, and imports of this description also require prior approval.

Strict supervision by way of inspection and treatment, where necessary, is exercised over the timber components as well as the contents of containers and unit cargo; packing materials of straw, raw cotton, rice hulls or rice straw are prohibited imports which will be destroyed at the port of entry. Cases or cartons which have previously contained fruit or plant materials are prohibited imports, while dunnage and scantlings used in containers or cargo holds are subject to quarantine. All timber, including logs or sawn timber, is carefully inspected to ensure that it does not contain insects which could spread to forests or timber constructions.

Additional information concerning Australian plant quarantine regulations, treatments and lists of prohibitions and restrictions, may be obtained from Australian consular offices abroad, the Director of Plant Quarantine with the Commonwealth Department of Health in Canberra or from the Chief Quarantine Officer (Plants) with the respective State Departments of Agriculture in Sydney, Melbourne, Brisbane, Adelaide, Perth and Hobart.

## National health benefits

### Health, cash benefits to persons and other services

For an analysis by function and economic type of expenditure by all Commonwealth authorities see Chapter 18, Public Authority Finance.

Most Commonwealth health benefits are financed through the National Welfare Fund. The following two tables show cash benefits to persons by Commonwealth authorities on a State basis for 1970-71 and for the years 1966-67 to 1970-71.

COMMONWEALTH AUTHORITIES, HEALTH: CASH BENEFITS TO PERSONS, 1970-71  
(\$'000)

	N.S.W. (a)	Vic.	Qld	S.A. (a)	W.A.	Tas.	N.T. (a)	A.C.T. (a)	Abroad	Total
Hospital benefits . . . . .	22,405	10,622	6,947	4,989	3,548	1,078	211	12	..	49,812
Hospital benefits for pensioners . . . . .	9,052	5,255	3,813	1,999	2,058	1,048	114	217	..	23,555
Nursing home benefits . . . . .	21,378	9,350	8,009	4,520	4,650	1,512	..	58	..	49,477
Medical benefits . . . . .	38,799	24,397	9,136	11,956	8,437	2,879	..	..	..	95,604
Medical benefits for pensioners . . . . .	7,439	5,180	3,168	2,048	1,345	639	7	72	..	19,898
Milk for schoolchildren . . . . .	3,485	2,345	1,692	892	835	671	115	126	..	10,160
Pharmaceutical benefits n.e.i. . . . .	43,261	32,715	16,786	10,265	8,401	3,151	..	211	304	115,094
Pharmaceutical benefits for pensioners . . . . .	18,338	11,186	7,297	4,315	2,814	1,231	..	..	..	45,181
Tuberculosis campaign . . . . .	4,166	3,038	1,730	545	770	347	..	..	..	10,597
Handicapped children's benefit . . . . .	160	89	33	91	60	18	4	..	..	456
<b>Total.</b> . . . .	<b>168,483</b>	<b>104,177</b>	<b>58,611</b>	<b>41,620</b>	<b>32,918</b>	<b>12,574</b>	<b>450</b>	<b>697</b>	<b>304</b>	<b>419,834</b>

(a) State totals for New South Wales and South Australia also include most of the unallocable expenditure on cash benefits to persons resident in the Australian Capital Territory and the Northern Territory respectively.



**COMMONWEALTH AUTHORITIES, HEALTH: CASH BENEFITS TO PERSONS  
1966-67 TO 1970-71**

(\$'000)

	1966-67	1967-68	1968-69	1969-70	1970-71
Hospital benefits . . . . .	25,900	26,598	29,779	40,258	49,812
Hospital benefits for pensioners . . . . .	18,731	23,665	24,520	24,163	23,555
Nursing home benefits . . . . .	22,767	24,486	31,643	46,960	49,477
Medical benefits . . . . .	43,841	46,431	49,556	56,863	95,604
Medical benefits for pensioners . . . . .	14,351	16,116	16,912	19,224	19,898
Milk for schoolchildren . . . . .	9,021	9,831	10,053	10,051	10,160
Pharmaceutical benefits n.e.i. . . . .	72,001	73,019	81,764	95,650	115,094
Pharmaceutical benefits for pensioners . . . . .	29,280	32,115	36,609	41,069	45,181
Tuberculosis campaign . . . . .	10,974	11,266	11,460	10,554	10,597
Handicapped children's benefit . . . . .	..	..	76	485	456
<b>Total . . . . .</b>	<b>246,866</b>	<b>263,529</b>	<b>292,373</b>	<b>345,277</b>	<b>419,834</b>

Descriptions of each of the cash benefits to persons shown in the above tables are included in the following sub-sections.

**Hospital, nursing home, and handicapped children's benefits**

*Patients in approved hospitals.* A basic principle of the provision of benefits for patients in approved hospitals is the Commonwealth support of voluntary insurance against the costs involved. Insured patients in approved hospitals receive a Commonwealth hospital benefit of \$2 per day which is paid through the contributors' registered hospital organisations.

During 1971 the Hospital benefits tables were rationalised, generally in conjunction with the new charges adopted by the public hospitals in each State, as shown in the table, page 424. Pensioners enrolled in the Pensioner Medical Service are generally treated free of charge and, in some States, other pensioners may also be treated without charge. In addition to the following schedule registered organisations in some States operate a table to cover the cost of private hospital accommodation.

*Expenditure on hospital, nursing home, and handicapped children's benefits.* The following table shows the amount of these Commonwealth benefits paid during 1970-71. This does not include expenditure on mental hospitals (see pages 432-3).

**COMMONWEALTH HOSPITAL, NURSING HOME, AND HANDICAPPED CHILDREN'S  
BENEFITS PAID: STATES AND TERRITORIES, 1970-71**

(\$'000)

Type of patient	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Uninsured patients (80c) . . . . .	454	239	163	56	103	33	48	10	1,107
Insured patients (\$2)(a) . . . . .	9,515	5,634	2,108	2,449	1,895	718	(b)	(b)	22,319
Hospitalisation free of charge (\$2)(c) . . . . .	132	136	2,381	38	42	4	163	2	2,897
Pensioner patients (\$5) . . . . .	9,052	5,255	3,813	1,999	2,058	1,048	114	217	23,555
Nursing home patients (\$2)(d) . . . . .	13,564	5,415	4,508	(e)2,599	2,676	942	(e)	44	29,750
Intensive care nursing home patients (\$3) . . . . .	7,814	3,935	3,500	(e)1,921	1,973	570	(e)	14	19,727
Handicapped children (\$1.50) . . . . .	160	89	33	91	60	18	4	..	456
<b>Total . . . . .</b>	<b>40,691</b>	<b>20,703</b>	<b>16,507</b>	<b>9,153</b>	<b>8,808</b>	<b>3,333</b>	<b>328</b>	<b>288</b>	<b>99,811</b>

(a) Excludes payments of \$19,604,794 towards special accounts deficits, \$268,977 towards Subsidised Medical Services Scheme management expenses and \$3,615,690 towards Subsidised Medical Services Scheme fund benefit re-imbursements. (b) Members who live in the Northern Territory or the Australian Capital Territory, or who are abroad, receive their Commonwealth benefit and fund benefit through membership of an organisation registered in one of the States, and payments to them are included in the respective States. (c) Scheme introduced 1 July 1970. (d) Increased from \$2 to \$3.50 per day from 21 October 1971. (e) South Australia includes Northern Territory.

*Public hospital fees, family contribution and benefits.* The daily rates of fees charged by public hospitals, the weekly family contribution to major hospital funds and the daily rates of combined Commonwealth and hospital fund benefits paid are shown in the following table.



**DAILY RATES OF FEES CHARGED BY PUBLIC HOSPITALS AND TABLES OF BENEFITS, 1971**  
(£)

State or Territory	Date from which fees applied	Ward	Daily rates of fees	Weekly family contribution to major hospital funds	Daily rates of combined Commonwealth and fund benefits paid(a)
New South Wales	1 August 1971	public	15.00	0.82	15.00
		intermediate	(b)20.30	1.28	(b)20.30
		private	(b)24.30	1.52	(b)24.30
Victoria(c)	1 August 1971	public	15.00	0.80	15.00
		intermediate	23.00	1.30	23.00
		private	30.00	1.75	30.00
Queensland	1 November 1971	public	(d)	..	..
		intermediate	(b)14.00	0.80	(b)14.00
		private	(b)17.00	0.98	(b)17.00
South Australia(c)(e)	1 September 1971	standard	16.00	0.92	16.00
		intermediate	20.00	1.28	20.00
		private	24.00	1.60	24.00
Western Australia(c)(f)	1 September 1971	standard	20.00	1.05	20.00
		private	30.00	1.65	30.00
Tasmania(c)	1 July 1971	standard	13.50	0.70	13.50
		intermediate	18.00	1.00	18.00
		private	22.00	1.20	22.00
Northern Territory	1 April 1967	general	6.80	(g)	(g)
Australian Capital Territory(c)	1 August 1971	general	15.00	0.82	15.00
		private	26.30	1.52	26.30

(a) Fund benefits are not paid in excess of the hospital charge. (b) Basic bed charge in addition to which the funds pay benefits for extra services, as per benefits schedules of in-patient charges, e.g. prosthesis, splints, etc. This is included in the daily rates of fees for the other States. (c) Fees are comprehensive and separate charges for extra items are only raised for pathology services, radiology services and some miscellaneous procedures. (d) No charge. (e) Not applicable to 53 country hospitals to which Part IV of the South Australian Hospitals Act applies. These hospitals are controlled by the local councils and are not subject to direction by the State Government as far as fees are concerned. The fees for these hospitals vary. (f) On 1 May 1970, the public hospitals in Western Australia combined their public and intermediate wards to form a new standard ward and at the same time introduced an all-inclusive fee for all standards of accommodation. (g) Covered by differing public or standard ward tables in other States.

Fees in intermediate and private wards of New South Wales and Queensland hospitals are not comprehensive and separate charges are raised for extra services such as theatres, labour wards, prosthetic appliances, etc. Benefits are provided by funds which completely cover these separate charges. In Queensland where there is no charge for public ward accommodation, contributors insured in the intermediate and private ward tables receive a fund benefit of \$4 a day if they or their dependants occupy a free public ward bed.

A Commonwealth benefit of \$2 per day is payable to hospitals for patients hospitalised free of charge.

During the waiting period of two months after joining an organisation the Commonwealth benefit is payable at the rate of 80 cents per day, unless the organisation pays fund benefits, in which case Commonwealth benefit is payable at the higher rate of \$2 per day. While a member is in arrears with his contributions and fund benefits are not payable, the Commonwealth benefit is payable at the rate of 80 cents per day.

Contributors who would have been excluded from fund benefits because of organisations' rules covering pre-existing ailments, chronic illnesses or maximum benefits are assured of hospital fund benefits by the provisions of the special account plan. Since 1 January 1969 such a contributor has been entitled to receive benefit at his full insured rate, provided total benefits do not exceed the amount of the hospital charge. Benefit is paid either from the ordinary account or from a special account guaranteed by the Commonwealth. If the payments from the special account exceed contributions credited to the account, the amount of deficit is reimbursed by the Commonwealth.

A person who joins a registered hospital benefits organisation within eight weeks of being discharged from an approved nursing home is entitled to immediate Commonwealth benefit of \$2 a day and to fund benefits without having to serve a waiting period. From 26 November 1968 persons ceasing to be entitled to the benefits of the Pensioner Medical Service who join a registered organisation within two months before or within three months after ceasing to be a pensioner are not required to serve the normal waiting period before becoming eligible for fund benefits. This new provision also enables such contributions to be transferred to the special account. If a qualified patient in an approved hospital is not insured (i.e. not a member of a hospital benefits organisation), a Commonwealth benefit of 80 cents a day is deducted from his account by the hospital. The Commonwealth subsequently reimburses the hospital. Under arrangements made under the National Health Act public hospitals generally provide free public ward treatment to pensioners enrolled in the Pensioner

Medical Service who are classified as public ward patients. The Commonwealth pays the hospitals a benefit of \$5 a day for each pensioner patient. The hospital and medical insurance provisions were changed in 1969 to allow free insurance under certain circumstances and, from 1 July 1970, these provisions were extended to provide partial assistance with insurance to certain groups of persons. Details of this Subsidised Medical Services Scheme are set out on page 426.

*Patients in approved nursing homes.* The Commonwealth nursing home benefit of \$3.50 a day is payable in respect of all qualified patients in approved nursing homes, whether the patients are insured or not. This benefit is deducted from the patient's account and subsequently paid by the Commonwealth to the nursing home. If no charge is made by the nursing home, the Commonwealth nursing home benefit of \$3.50 a day is still payable to the nursing home in respect of qualified patients. From 1 January 1969 there has been payable in addition to the above mentioned benefit, a supplementary Commonwealth benefit of \$3.00 per day in respect of those qualified patients in approved nursing homes who are in need of and who are receiving intensive nursing home care.

There is no need for patients in approved nursing homes to be insured with a registered hospital benefits organisation, fund benefits being generally not payable. However, the National Health Act provides that where an insured special account patient is treated in an approved nursing home for an illness or injury requiring hospital treatment of the kind provided in an approved hospital and is given treatment equivalent to that which he would have received in an approved hospital, approval may be given to the payment of special account fund benefits.

*Handicapped children in approved handicapped persons homes.* Since 1 January 1969, handicapped children who are under sixteen years of age and who are accommodated overnight in an approved handicapped persons home have been entitled to a Commonwealth benefit of \$1.50 per day. The benefit is paid direct to the approved handicapped persons home and an equivalent amount is deducted from any charge raised by the home in respect of the handicapped child. The benefit applies to both physically and mentally handicapped children and is payable to homes conducted by charitable and religious organisations. It is not payable to homes conducted by a State Government or those conducted by a person or organisation for profit. There is no necessity for handicapped children in an approved handicapped persons home to be insured with a registered benefit organisation.

*Australians overseas.* Australian residents who receive hospital treatment in recognised hospitals in overseas countries, while temporarily absent from Australia, are eligible to receive the Commonwealth and fund benefits to which they would be entitled if the treatment were given in Australia.

*Registered hospital benefits organisations.* The following table shows the number of registered hospital benefits organisations, the membership at 30 June 1971, and fund benefits paid during 1970-71. As many persons contribute on behalf of both themselves and their dependants, the total number of persons covered by hospital benefit schemes is considerably higher than the number of members.

HOSPITAL BENEFITS: ORGANISATIONS AND FUND BENEFITS, STATES, 1970-71

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Registered organisations at 30 June 1971(a)	35	24	7	10	7	10	93
Membership at 30 June 1971 '000	1,623	1,232	372	433	351	119	(b)4,130
Fund benefits paid(c) \$'000	57,390	35,003	10,753	14,576	10,922	3,701	(b)132,346

(a) Excludes interstate branches. (b) Members who live in the Northern Territory or the Australian Capital Territory, or who are abroad, receive their Commonwealth benefit and fund benefit through membership of an organisation registered in one of the States, and payments to them are included in the respective States. (c) Includes \$3,736,834 ancillary benefits, also includes \$3,615,690 fund benefits reimbursed to the organisations under the Subsidised Medical Services Scheme.

### Medical benefits

A medical benefits scheme has operated since July 1953, being authorised firstly by the National Health (Medical Benefits) Regulations and then by the *National Health Act* 1953-1971. The basic principle of the scheme is Commonwealth support of voluntary insurance towards meeting the costs of medical attention. The benefits under the scheme relate primarily to medical attention on a fee-for-service basis, although provision is made for a Commonwealth subsidy to organisations arranging for medical service on a contract basis.

In order to qualify for a Commonwealth fee-for-service benefit a person is required to be insured with a registered medical benefits organisation. The organisation pays the Commonwealth benefit to the contributor, usually at the time it pays its own benefit. Reimbursement of the Commonwealth benefit is subsequently made to the organisation by the Commonwealth.



On 1 July 1970 the scale of benefits paid was considerably revised. Full details of benefits are set out in the schedules to the *National Health Act* 1953-1971. There is one scale of benefits for each State. Weekly contributions to medical benefits funds range from 25 cents to 42 cents for a single person and from 50 cents to 84 cents for a married contributor. The level of benefits has been set so that a contributor is required to pay 80 cents of the 'most common fee' charged for a general practitioner consultation, and up to \$5 for the more costly operations where the 'most common fee' is charged. In fixing the scale of 'most common fees', differential rates have been determined for certain medical services which are customarily performed by either a general practitioner or a specialist. To qualify for the higher (specialist) rate of benefit the patient must be formally referred to the specialist by another medical practitioner by means of a Notice of Referral. Higher benefits are also payable where the patient is referred to a specialist by a dentist for a service arising from a dental service, or by an optometrist or optician to an ophthalmologist.

In addition to the professional services normally rendered by a qualified medical practitioner, the schedules now cover certain prescribed medical services rendered in the operating theatre of an approved hospital by a legally qualified dentist or dental practitioner approved for this purpose by the Director-General of Health.

Contributors who would otherwise be excluded from fund benefits because of organisations' rules covering pre-existing or long-term ailments receive full fund benefits with the Commonwealth re-imbursing the organisations for any deficits incurred in providing benefits in such cases.

Australian residents temporarily absent from Australia who receive medical attention by registered medical practitioners in the country they are visiting are entitled, if insured, to the Commonwealth benefit and the medical fund benefit to which they would be entitled if the service were rendered in Australia.

*Expenditure on medical benefits.* The following table shows the number of registered medical benefit organisations, their membership, the number of medical services rendered to members and their dependants, and payments of Commonwealth benefits and medical fund benefits to members of registered organisations. As many persons contribute on behalf of both themselves and their dependants, the total number of persons covered by medical benefit schemes is considerably higher than the number of contributors. At 30 June 1971 the estimated number of persons covered by contributory medical schemes was 9,801,176.

MEDICAL BENEFITS: SUMMARY, STATES, 1970-71

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.(a)
Registered organisations(b)(c)	No. 30	19	7	7	8	10	81
Members(c)	'000 1,503	1,168	372	408	345	118	3,916
Medical services	'000 15,327	10,633	4,349	4,875	3,197	1,174	39,555
Commonwealth benefit(d)	\$'000 36,669	23,871	8,984	11,767	8,229	2,841	92,361
Fund benefit(e)	'000 37,370	22,982	7,564	8,228	5,746	1,997	83,888

(a) Members who live in the Northern Territory or the Australian Capital Territory, or who are abroad, receive their Commonwealth benefit and fund benefit through membership of an organisation registered in one of the States. (b) Excludes interstate branches. (c) At end of period. (d) Excludes payments of \$2,231,055 towards special accounts deficits, and \$127,670 towards management expenses of the Subsidised Medical Services Scheme. (e) Includes \$2,657,019 ancillary fund benefits and also includes \$885,004 fund benefits reimbursed to the organisations under the Subsidised Medical Services Scheme.

### Subsidised Medical Services Scheme

As from 1 January 1970 certain low income families; persons in receipt of unemployment, sickness and special benefits under Social Services legislation; and migrants during the first two months after their arrival in Australia, have been eligible for free medical benefits insurance and hospital insurance up to the public ward charge. On 1 July 1970, the Scheme was extended to provide certain families whose incomes are slightly in excess of the eligible limit for free insurance, with health insurance at reduced contribution rates. The income eligibility level for free insurance during 1971 was \$46.50 per week; while families with incomes between \$46.50 and \$52.50 a week paid reduced contributions. The name of this Scheme was changed to *Subsidised Health Benefits Plan* from 1 November 1971.

### Pensioner Medical Service

The Pensioner Medical Service, which commenced in 1951, was introduced under the authority of the National Health (Medical Services to Pensioners) Regulations made under the provisions of the *National Health Services Act* 1948-1949. The service has been continued under the provisions of the *National Health Act* 1953-1971.

Persons eligible to receive the benefits of the Pensioner Medical Service are those who receive an age, invalid or widow's pension, or a sheltered employment allowance, under the *Social Services Act* 1947-1971, or a service pension under the *Repatriation Act* 1920-1971, and who are able to satisfy the means test in force immediately prior to 1 October 1969; and their dependants. Also eligible are persons in receipt of an allowance under the *Tuberculosis Act* 1948, and their dependants.

The benefits provided to eligible persons consist of free medical service of a general practitioner nature such as that ordinarily rendered in the surgery or at the patient's home, including treatment at home following an operation. Specialists services, general anaesthetics, the setting of fractures, and operations are not covered. Patients may be charged a small fee by doctors for travelling and for attendance outside normal surgery or visiting hours. General practitioners enrolled in the scheme are paid on a fee-for-service basis by the Commonwealth Government.

Qualified persons are entitled to a wide range of medicines without charge at any pharmacy, on presentation of a doctor's prescription. Free hospital treatment is also provided for public ward patients in public hospitals.

At 30 June 1971 the total number of pensioners and dependants enrolled in the Pensioner Medical Service was 1,216,239, while the number of doctors participating in the scheme at that date was 6,617. During 1970-71 doctors in the scheme provided 9,939,496 services (visits and surgery consultations) for persons enrolled in the scheme. For these services they were paid \$19,898,194. The average number of services rendered by doctors to each enrolled person was 8.25.

#### Free milk for school children scheme

The *States Grants (Milk for School Children) Act* 1950 was passed with the object of improving the diet of school children by the addition of a small quantity of milk each day. All children under the age of thirteen years attending government or non-government primary schools, including nursery schools, kindergartens, creches and missions for Aborigines, are eligible to receive free milk. The cost of the milk and half the capital or incidental costs, including administrative expenses of the scheme, are reimbursed by the Commonwealth to the States. All States participate in the scheme. At the end of 1970 approximately 1,894,000 children were entitled to receive free milk under this scheme. Expenditure by the Commonwealth Government during the years 1966-67 to 1970-71 was as follows.

COMMONWEALTH EXPENDITURE ON MILK FOR SCHOOL CHILDREN SCHEME  
STATES AND TERRITORIES, 1966-67 TO 1970-71  
(\$'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1966-67	3,073	2,394	1,400	860	701	451	77	93	9,049
1967-68	3,357	2,628	1,376	955	853	511	75	106	9,861
1968-69	3,380	2,641	1,549	1,065	800	431	110	109	10,085
1969-70	3,458	2,650	1,570	910	800	476	95	124	10,083
1970-71	3,497	2,350	1,697	895	838	682	115	126	10,199

The figures in the foregoing table represent amounts reimbursed to the States in each financial year for cash benefits to persons and other related expenditure and are not the actual State expenditures in that year.

#### Pharmaceutical benefits

All persons receiving treatment from a medical practitioner registered in Australia are eligible for benefits on a comprehensive range of drugs and medicines when supplied by an approved pharmacist upon presentation of a prescription, or by an approved hospital to patients receiving treatment at the hospital. Special arrangements exist to cover prescriptions dispensed at locations outside the normal conditions of supply e.g. in remote areas.

Until November 1971, patients other than eligible pensioners and their dependants paid 50 cents of the cost of each benefit prescription supplied. In November 1971 the patient contribution was increased from 50 cents to \$1.00 for each benefit prescription provided to patients other than eligible pensioners and their dependants and those covered by provisions relating to the Subsidised Medical Services Scheme. Patients qualifying under the Subsidised Medical Services Scheme continue to contribute at the rate of 50 cents for each benefit prescription supplied.



Total Commonwealth expenditure on pharmaceutical benefits in the year 1970-71 was \$160,274,907.

The following table sets out the number of prescriptions and expenditure on the more frequently prescribed therapeutic preparations under the Pharmaceutical Benefits Scheme for 1969-70 and 1970-71. The expenditure for both years includes patient contributions, which totalled \$24,384,028 in 1970-71. Prescriptions issued free to pensioners are included, and these amounted to \$45,180,856 in 1970-71. Benefits dispensed by hospitals and those covered by special arrangements are not included; these amounted to \$26,917,666 in 1970-71.

**PRESCRIPTIONS DISPENSED UNDER THE PHARMACEUTICAL BENEFITS SCHEME(a)**  
**1970 AND 1971**

Therapeutic category	Year ended 30 June			
	1970		1971	
	Prescriptions	Expenditure	Prescriptions	Expenditure
	000's	\$'000	000's	\$'000
Analgesics . . . . .	5,248	10,997	6,017	12,849
Antacids . . . . .	2,294	3,353	2,457	3,694
Anti-cholinergics . . . . .	1,046	3,429	1,098	3,592
Anti-convulsants . . . . .	429	1,778	625	2,073
Anti-depressants . . . . .	676	2,455	1,750	5,460
Anti-diabetics . . . . .	695	2,651	712	2,947
Anti-histamines . . . . .	4,355	7,798	4,554	8,357
Blood vessels—Drugs acting on . . . . .	3,508	12,795	3,627	13,583
Broad spectrum antibiotics . . . . .	6,395	17,773	6,678	18,954
Bronchial spasm—preparations . . . . .	1,715	3,234	2,012	5,313
Diuretics . . . . .	3,084	10,772	3,302	11,273
Expectorants and cough suppressants . . . . .	1,719	1,432	2,081	1,761
Eye drops . . . . .	1,287	2,077	1,358	2,245
Gastro-intestinal sedatives . . . . .	701	1,295	737	1,357
Genito-urinary infections—Drugs acting on . . . . .	1,425	4,775	1,287	4,856
Heart—Drugs acting on . . . . .	1,345	2,418	1,386	2,693
Iron preparations . . . . .	1,309	1,493	1,478	1,720
Penicillins . . . . .	4,958	11,292	5,724	15,045
Sedatives and hypnotics . . . . .	6,253	6,494	5,563	5,979
Sulphonamides . . . . .	992	1,301	813	1,102
Tranquillisers . . . . .	1,165	3,708	1,480	4,726
Other therapeutic substances . . . . .	14,976	22,918	16,748	28,162
<b>Total . . . . .</b>	<b>65,575</b>	<b>136,238</b>	<b>71,487</b>	<b>157,741</b>

(a) Excludes benefits dispensed by hospitals and those covered by special arrangements.

### Anti-tuberculosis campaign

Under an arrangement with the Commonwealth Government, each State conducts a campaign against tuberculosis. The Commonwealth Government reimburses the State for all approved capital expenditure in relation to tuberculosis, and for net maintenance expenditure to the extent that it exceeds maintenance expenditure for the year 1947-48. Thus the States carry out the physical or field work of the national campaign and the Commonwealth acts in an advisory, co-ordinating, and financial capacity. An advisory council, known as the National Tuberculosis Advisory Council, has been set up. There are twelve members, the chairman being the Commonwealth Director-General of Health.

To reduce the spread of infection the Commonwealth Government pays allowances to persons suffering from infectious tuberculosis, so that they may give up work and undergo treatment. These allowances have been in operation since 13 July 1950 and the current rates payable with effect from 4 May 1972 are shown in the following table. Persons eligible for the 'married persons' rate comprise only those with a dependent spouse; 'single persons' include widowers, divorcees and married persons without a dependant spouse.

**RATES OF TUBERCULOSIS ALLOWANCE: AUSTRALIA, 1972**  
(**\$**)

<i>Classification</i>	<i>Weekly allowance</i>
Married person rate . . . . .	35.25
Single person rate—	
Where there are dependent children . . . . .	26.25
Where there are no dependent children . . . . .	(a)21.50

(a) Reduced to \$18.25 where treatment is received free of charge in an institution.

In addition to the above rates there may be payable a mother's or guardian's allowance of \$2.00 a week or supplementary assistance of up to \$2.00 a week. An allowance of \$4.50 a week is payable in respect of each dependent child of a sufferer.

There is a means test on income but not on property. The allowance is reduced by the amount by which a person's income from sources other than his allowance exceeds, in the case of a person receiving the married person rate, \$17.00 a week; a person who is without a spouse or dependent female and is entitled to a 'single person' rate, \$10.00 a week; and a person with a spouse but who is not entitled to a 'married person' rate, \$8.50 a week.

*Commonwealth expenditure.* Expenditure by the Commonwealth Government on its anti-tuberculosis campaign is set out in the following tables.

**COMMONWEALTH EXPENDITURE ON ANTI-TUBERCULOSIS CAMPAIGN**  
**STATES AND TERRITORIES, 1970-71**  
(**\$'000**)

<i>State or Territory</i>	<i>Cash benefits to persons—</i>		<i>Grants to States—</i>	<i>Total(c)</i>
	<i>Welfare(a)</i>	<i>Health(b)</i>	<i>Capital</i>	
New South Wales . . . . .	230	4,166	143	4,629
Victoria . . . . .	158	3,038	151	3,452
Queensland . . . . .	131	1,730	55	1,928
South Australia . . . . .	52	545	108	742
Western Australia . . . . .	30	770	12	877
Tasmania . . . . .	32	347	..	412
Northern Territory . . . . .	26	..	..	26
Australian Capital Territory . . . . .	1	..	..	1
<b>Australia . . . . .</b>	<b>659</b>	<b>10,597</b>	<b>469</b>	<b>12,067</b>

(a) Allowances to sufferers. (b) Tuberculosis campaign. (c) Includes administrative costs.

**COMMONWEALTH EXPENDITURE ON ANTI-TUBERCULOSIS**  
**CAMPAIGN: AUSTRALIA, 1966-67 TO 1970-71**  
(**\$'000**)

<i>Year</i>	<i>Cash benefits to persons—</i>		<i>Grants to States—</i>	<i>Total(c)</i>
	<i>Welfare(a)</i>	<i>Health(b)</i>	<i>Capital</i>	
1966-67 . . . . .	1,193	10,974	499	12,939
1967-68 . . . . .	1,091	11,266	780	13,382
1968-69 . . . . .	921	11,460	847	13,511
1969-70 . . . . .	771	10,554	593	12,246
1970-71 . . . . .	659	10,597	469	12,067

(a) Allowances to sufferers. (b) Tuberculosis campaign. (c) Includes administrative costs.

### Mass immunisation campaigns

*Poliomyelitis.* An anti-poliomyelitis campaign, using Salk vaccine, was commenced in 1956. This campaign continued until 1967 when, following a recommendation by the National Health and Medical Research Council, a campaign using Sabin vaccine was commenced in all States, the Northern Territory and the Australian Capital Territory. The Sabin vaccine is taken orally and a course of treatment consists of three doses. These are given at intervals of eight weeks. There have been nine new cases of poliomyelitis notified over the last five years; two of these cases were notified in 1971.

*Measles.* Early in 1970, as a result of a recommendation by the National Health and Medical Research Council in May 1969, a campaign against measles was commenced in the Australian Capital Territory and the Northern Territory and all States except New South Wales. The vaccine being used is derived from the Schwarz virus strain which is a live attenuated virus. It is administered by intramuscular injection to children in their second year of life. A course of treatment consists of one dose. A total of 158,000 doses was distributed through the Commonwealth Serum Laboratories during 1971.

*Rubella.* In 1969, the National Health and Medical Research Council recommended that the Cendehill rubella vaccine be used in anti-rubella (German measles) campaigns in Australia. Consequently, the Commonwealth agreed to make this vaccine available to the States on the same basis as poliomyelitis and measles vaccines. By December 1970 all States had indicated that they would accept this offer. Immunisation campaigns were conducted in all States, the Northern Territory and the Australian Capital Territory during 1971 amongst girls in the twelve to fourteen years age group. The vaccine is available through health departments and, by them, through private practitioners to other women at risk. A course of treatment with rubella vaccine, given intramuscularly, is one dose.

### Commonwealth health services organisations

*The Commonwealth Health Laboratory Service* was established under provisions of the *National Health Act 1953-1971*. The laboratories provide diagnostic and investigational facilities at fifteen locations, principally in country areas, throughout Australia. Health laboratories are situated in Albury, Alice Springs, Bendigo, Cairns, Canberra, Darwin, Hobart, Kalgoorlie, Launceston, Lismore, Port Pirie, Rockhampton, Tamworth, Toowoomba and Townsville. Their primary role is to assist medical practitioners in the diagnosis of illness and disease and to provide facilities for investigations into public health and aspects of preventive medicine. During 1970-71, the laboratories carried out approximately 2.5 million pathology tests and investigations in respect of 943,876 patient requests. During the year a revised system of work assessment was introduced and consequently the 1970-71 statistics are not directly comparable with those for earlier years.

The *Commonwealth Serum Laboratories (CSL)* are controlled by the Commonwealth Serum Laboratories Commission, a corporate body established under the *Commonwealth Serum Laboratories Act 1961-70*. CSL is Australia's leading centre for the production and supply of biological products for human and veterinary use and one of Australia's foremost scientific institutes.

Its main functions are to produce and sell prescribed biological products used for therapeutic purposes and to ensure the supply of prescribed essential biological products in accordance with national health needs. The functions include research and development relating to the range of products in its charter and allied fields and the maintenance of potential production capacity for use in emergencies. Located at Parkville, Melbourne, CSL's research laboratories and manufacturing and storage buildings now cover most of the 27-acre site of Crown Land granted in 1918.

For several decades, CSL has been Australia's chief supplier of biological medicines, insulins, vaccines, penicillins, human blood fractions, BCG and an ever-increasing range of veterinary biological products needed by Australia's sheep, cattle, pig and poultry industries.

In addition, biological research into many kinds of human and veterinary disease is carried out, covering the fields of bacteriology, biochemistry, immunology and virology.

The Laboratories employ more than 1,000 people, including medical officers, veterinarians, bacteriologists, biochemists, physicists, engineers, accountants, laboratory assistants and skilled tradesmen.

*The Commonwealth X-ray and Radium Laboratory* was originally established in 1929 as the Commonwealth Radium Laboratory, and has served from that time as the Commonwealth centre for radiological physics and as custodian of all Commonwealth-owned radium used for medical purposes. The laboratory's functions have expanded over the years to include the physical aspects



of X-rays; the distribution of all radio-isotopes used in Australia for medical purposes; the maintenance of facilities for radio-chemical investigation; the assay of radioactive substances in the Australian environment; and the maintenance of a whole-body monitor. National standards for the measurement of X-rays and of radio-isotopes are also maintained. The laboratory provides assistance in matters relating to protection against ionising radiations and operates a film-badge service to monitor the radiation exposure of those who work with such radiation. The advisory service on protection has recently been extended to include the hazards associated with the use of microwave and laser radiations. In 1970-71 there were 11,502 deliveries of radio-isotopes, comprising 46 different isotopes, procured for use in medicine and medical research. Of these 9,954 deliveries were obtained from the Australian Atomic Energy Commission. Free issues for medical diagnosis and therapy supplied for patients throughout Australia were 202,566, the cost of \$630,365 being met from the National Welfare Fund. Film badges, numbering 113,065 were processed, assessed, and reported on. The Laboratory also supplies radon to approved hospitals and private practitioners in Australia and New Zealand. In 1970-71, 24,783 millicuries of radon were issued. Administrative costs for 1970-71 were \$328,183 and \$54,508 was expended on plant and equipment.

The *Commonwealth Acoustic Laboratories* were established under the *Acoustic Laboratories Act* 1948 to undertake scientific investigations into hearing and problems associated with noise as it affects individuals. The Laboratories' functions also include research into medical applications of ultrasound and advice to the Armed Forces and Commonwealth Departments and instrumentalities on hearing conservation and the reduction of noise. Audiological services are provided in major centres throughout Australia to assist children, ex-servicemen and pensioners with hearing problems. Hearing aids are supplied and serviced free of charge to persons under 21 years and to pensioners, and their dependants, for a hiring fee of \$10. Hearing aids are also provided and maintained on behalf of the Repatriation and other Commonwealth Departments. During 1970-71 the number of new cases examined at the laboratories was 28,795 including 9,800 children, 5,885 repatriation cases, 982 members of the defence forces, 8,907 pensioners and 1,166 civil aviation referrals; 14,037 calaid hearing aids were fitted and 62,411 were on loan at the end of the year. The cost of supply and maintenance of hearing aids to persons under twenty-one years of age and pensioners was \$438,976. Administrative costs of the laboratories were \$1,106,213 and expenditure on plant and equipment \$154,024.

The *Home Nursing Subsidy Scheme*, under the *Home Nursing Act* 1956, provides for a Commonwealth subsidy to assist in the expansion of home nursing activities. Organisations eligible for the subsidy are those which are non-profit making, employ registered nurses, and receive assistance from a State Government, local government body or other authority established by or under State legislation. During 1970-71 subsidies totalling \$1,450,303 were paid to 95 organisations providing home nursing services in the States. Home nursing services in the Northern Territory and the Australian Capital Territory are provided by the Commonwealth Department of Health.

### Other Commonwealth health organisations

The *National Health and Medical Research Council* was established in 1936 to replace the National Health Council. Its main functions are to advise Commonwealth and State Governments on all matters of public health legislation and administration, on matters concerning the health of the public, and on medical research. It also advises the Commonwealth and State Governments on the merits of reputed cures or methods of treatment which are from time to time brought forward for recognition. The Council advises the Commonwealth Minister for Health on the application of expenditure from the Medical Research Endowment Fund which was established under the *Medical Research Endowment Act* 1937 to provide assistance to departments of the Commonwealth or of a State engaged in medical research; to universities for the purpose of medical research; to institutions and persons engaged in medical research and in the training of persons in medical research. The Commonwealth makes a triennial appropriation for the Fund, that for 1970 to 1972 being \$6,772,000.

The *School of Public Health and Tropical Medicine* was established in 1930 by the Commonwealth Government at the University of Sydney under an agreement with that University. It provides, for medical graduates and certain undergraduates, training in public health and tropical medicine in addition to carrying out research and consultative activities in these and allied fields. During 1970-71, fifteen diplomas were awarded in Public Health and seven in Tropical Medicine and Hygiene. Costs met by the Commonwealth during 1970-71 were \$662,094 for administration and \$17,359 for plant and equipment.

The *Institute of Child Health* is associated with the School of Public Health at the University of Sydney and with the Royal Alexandra Hospital for Children at Camperdown. Its activities include research into medical and social problems of childhood, undergraduate and postgraduate teaching



at the University of Sydney, collaboration with other national and international organisations concerned with child health and disease, and the training of United Nations and Colombo Plan Fellows. Costs of the Institute paid by the Commonwealth during 1970-71 were \$159,606 for administration and \$61,629 for plant and equipment.

*The Commonwealth Bureau of Dental Standards* operates under Section 9 of the *National Health Act* 1953-1971. It is part of the Commonwealth Department of Health and is concerned with research and testing related to dental and allied materials, instruments and processes. It assists in the preparation of recognised standards for materials and instruments through the Standards Association of Australia and co-operates with the Australian Dental Association in its programme of accreditation of products. Its functions include the provision of a consultative service and testing facilities for public instrumentalities, the dental profession, and manufacturers and distributors of dental products. The number of these products tested during 1970-71 was 574. Regular surveys are made of dental products on the market and the results are made available to the profession. Expenditure on plant and equipment for 1970-71 was \$2,340 and administrative expenses including salaries were \$60,000.

*The Australian Institute of Anatomy* is administered by the Australian Capital Territory Health Services Office of the Commonwealth Department of Health. Its prime function is to conduct an anthropological museum. Of particular interest in the museum are exhibits dealing with the reproduction of life and a comprehensive national ethnographic collection. Particular emphasis in the displays is placed on the Australian Aborigines. The scientific research work of the Institute is mostly concentrated on problems of nutrition by field surveys of dietary status and laboratory investigation into the biochemistry of nutrition and metabolism.

*The National Biological Standards Laboratory* was set up under the *Therapeutic Substances Act* 1953-1959 which empowers the Commonwealth to ensure that therapeutic substances used for the prevention, diagnosis, and treatment of disease in man and animal are safe, pure, and potent. The *Therapeutic Goods Act* 1966, was proclaimed on 12 November 1970. This Act repealed the *Therapeutic Substances Act* 1953-1959 and extended the Commonwealth's power to cover therapeutic goods such as surgical dressings and containers of substances for therapeutic use. The Commonwealth Director-General of Health is authorised under the Act to set up laboratories to test such substances. Of the 2,110 samples examined by the Laboratory during 1970-71, 367 failed to meet the required standards. In addition, 1,619 safety tests were performed, 10 were failed, and 27 were indeterminable. Administrative costs for 1970-71 were \$912,649 and \$77,315 was expended on plant and equipment.

*The Drug Evaluation Committee* was formally set up in June 1963 to advise on the importation of new and existing drugs and toxicity of drugs already available on the Australian market. It has power to co-opt and seek advice from specialist medical colleges and associations, and from the medical and allied professions, the drug manufacturers and other sources. The Committee's reports and resolutions have resulted in the establishment of a Register of Adverse Drug Reactions and amendments to the Customs (Prohibited Imports) Regulations implemented on 1 August 1970 to provide control on importation of new drugs. During 1970-71, 133 applications for general marketing were received, an increase of 45 over the previous year. In addition, 69 applications for clinical trials were submitted.

*The Hospital and Allied Services Advisory Council* was created by agreement at the 1970 Australian Health Ministers Conference to provide the Ministers with advice on the co-ordination of the various matters connected with hospital and allied services through the operation of four sub-committees. The four Committees of Council are the Uniform Costing Committee, the Research Committee, the Computer Committee and the Hospital and Allied Services Construction Planning Committee.

## Commonwealth grants to States

### Grants for mental health institutions

Following a survey of the mental health facilities and needs in Australia made in 1955, the Commonwealth made an offer of \$20 million to the States as part of a capital expenditure programme of \$60 million on increasing and improving patient accommodation. All States accepted the Commonwealth offer. By 1963 more than three-quarters of the total grant under the *States Grants (Mental Institutions) Act* 1955 had been distributed and the Commonwealth Government announced in November 1963 its intention of continuing assistance to the States towards capital costs on a similar basis, but without overall limit, for a period of three years. In May 1964 the *States Grants (Mental Health Institutions) Act* 1964 was passed to implement that policy. This Act provided for the continuation of Commonwealth aid of \$1 for every \$2 of capital expenditure by the States in connection with the buildings or equipment of mental health institutions for the three-year period ending

30 June 1967. With the passing of amending Acts in 1967 and 1970 this period has been extended firstly to 30 June 1970 and then to 30 June 1973. The following table sets out the amounts which have been paid to the State Governments by the Commonwealth Government from 1966-67 to 1970-71.

**EXPENDITURE ON MENTAL HEALTH INSTITUTIONS BY THE COMMONWEALTH GOVERNMENT: STATES, 1966-67 TO 1970-71**  
(\$'000)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
1966-67. . . . .	2,217	1,192	288	193	260	823	4,973
1967-68. . . . .	2,095	1,381	196	63	148	358	4,243
1968-69. . . . .	1,948	1,200	323	433	375	399	4,678
1969-70. . . . .	2,282	947	602	1,299	241	108	5,478
1970-71. . . . .	1,414	798	464	909	395	219	4,199

#### Paramedical services

The *States Grants (Paramedical Services) Act* 1969 provides for the Commonwealth to share on a \$1 for \$1 basis with participating States the cost of approved paramedical services, such as chiropody, occupational therapy, physiotherapy and speech therapy, provided wholly or mainly for aged persons in their homes.

### Commonwealth grants to organisations associated with public health

In addition to providing the services mentioned on pages 419-32, the Commonwealth Government gives financial assistance to certain organisations concerned with public health. Examples of organisations included in this category are given in the following text. More detailed information on their operations and functions is given in Year Book No. 53, pages 570-3.

The *Commonwealth Council for National Fitness* operates under the *National Fitness Act* 1941. Its main function is to advise the Minister for Health concerning the promotion of national fitness. The Act also provides for the establishment of a trust account, known as the National Fitness Fund, to assist in financing the movement. During 1970-71 the Commonwealth's contribution to the Fund was \$416,000, of which \$66,000 was for assistance towards capital expenditure. Expenditure from the Fund during 1970-71 was \$424,491, distributed as follows: State National Fitness Councils, \$270,308; State Education Departments, \$34,000; State Universities, \$24,800; Australian Recreation Leadership Course, \$6,600; capital expenditure on national fitness projects, \$74,491; grants to Australian Capital Territory organisation, \$7,500; and administration, \$6,792.

The *Royal Flying Doctor Service* is a non-profit organisation providing medical services in remote areas of Australia. It is distinct from, but co-ordinates with, the Aerial Medical Services operated by the Commonwealth Department of Health from Darwin and Alice Springs in the Northern Territory. The Royal Flying Doctor Service is financed mostly from donations and government contributions. During the triennium ended 30 June 1971 the Commonwealth Government contributed at the rate of \$350,000 per annum—\$170,000 capital assistance and \$180,000 towards operational costs. In addition a progress payment of \$12,526 was made towards the cost of the changeover of twelve radio base stations to single side band operation. The Service made 3,651 flights during 1970-71, travelling 1,638,939 miles and transporting 4,061 patients. In the same period medical staff conducted a total of 82,596 consultations and dental treatment was given to 2,434 patients. The radio network of the Service handled 306,767 telegrams.

The *Red Cross Blood Transfusion Service* is conducted by the Australian Red Cross Society throughout Australia. The operating costs of the service in the States are met by the State Governments paying 60 per cent; the Commonwealth, 30 per cent; and the Society, 10 per cent. In the Northern Territory and Australian Capital Territory the Commonwealth pays 90 per cent and the Society 10 per cent. Commonwealth expenditure for each State and Territory during 1970-71 was as follows: New South Wales, \$196,752; Victoria, \$251,290; Queensland, \$170,098; South Australia, \$124,264; Western Australia, \$79,499; Tasmania, \$23,526; Northern Territory, \$23,000; and the Australian Capital Territory, \$16,870, making a total of \$885,299.



The *National Heart Foundation of Australia* is a private national organisation established to promote research in cardiovascular disease, to rehabilitate heart sufferers and to foster the dissemination of information about heart diseases. Formed in 1960, as a result of a public appeal yielding \$5 million to which the Commonwealth Government contributed \$20,000, the Foundation has its headquarters in Canberra. From its inception to the end of 1971 the Foundation has allocated more than \$4,700,000 for grants-in-aid towards research in university departments, hospitals and research institutes; research fellowships tenable in Australia and overseas; and overseas travel grants. Most of the annual expenditure of about \$750,000 is devoted to supporting research into cardiovascular disease.

The *World Health Organisation* (WHO), founded during 1948, is a specialised agency of the United Nations having as its objective the attainment by all peoples of the highest level of health. It functions as the directing and co-ordinating authority in international health work; provides consultative and technical assistance to governments and special groups; examines all aspects of health including preventive and curative medicine and research; sets international standards with respect to food, biological, pharmaceutical and similar products; and determines Regulations for the control of communicable diseases. The organs of WHO are the World Health Assembly and the six Regional Committees which meet annually and the Executive Board which meets twice a year. Australia is assigned to the Western Pacific Region, the headquarters of which is at Manila, and was represented at both the 24th World Health Assembly in Geneva in May and the Regional Committee Meeting in Manila in September 1971. Australia's contribution to WHO for 1970-71 was \$888,000.

The *International Agency for Research on Cancer* was established by the 18th World Health Assembly in 1965 within the framework of the World Health Organisation. The headquarters of the Agency are located in Lyons, France. The objectives and functions of the Agency are the provision for planning, promoting and developing research in all phases of the causation, treatment and prevention of cancer; collection and dissemination of information on epidemiology and cancer research throughout the world; education and training of personnel for cancer research; and the encouragement of, and assistance at national level if necessary by the direct establishment of, research organisations. Participation in the Agency is subject to membership of the World Health Organisation and, at the determination of the Governing Council, the ability of the State to contribute effectively to the scientific and technical work of the Agency. Australia became a Participating State within a few months after the establishment of the Agency. At present there are 9 Participating States namely: Australia, Belgium, France, The Federal Republic of Germany, Italy, The Netherlands, The Union of Soviet Socialist Republics, the United Kingdom and the United States of America. Australia's contribution to the I.A.R.C. for 1970-71 was \$134,764.

## Commonwealth Parliamentary Committees concerning Public Health

### Senate Select Committee on Drug Trafficking and Drug Abuse

On 25 November 1969, the Senate resolved that a Select Committee of the Senate be appointed to inquire into and report upon drug trafficking and drug abuse in Australia and, in particular, (a) the incidence, distribution and causes of drug abuse; the extent, organisation and methods of drug trafficking, including the sources of supply; the adequacy of existing Commonwealth and State legislation and administration; the adequacy of present educational programmes against drug abuse; the adequacy of existing international agreements affecting Australia; the effectiveness of existing international law enforcement agencies and methods in regard to Australia, and (b) to make such recommendations as it may think fit, on legislative and administrative measures by the Commonwealth to prevent and deal with drug trafficking and drug abuse; the desirability of further international agreements or improvements in existing international law enforcement agencies and methods so far as they affect Australia; and the treatment and rehabilitation of persons dependent on drugs. The report of this Committee was tabled on 6 May 1971. For information on drug detection and offences see Chapter 15, Law, Order and Public Safety.

### House of Representatives Select Committee on Pharmaceutical Benefits

On 16 September 1970, the House of Representatives resolved that a Select Committee be appointed to inquire into and make recommendations on all aspects of the provision of, and arrangements for the supply of, pharmaceutical benefits under the *National Health Act* 1953-1970, with particular reference to the scope of the scheme; all factors contributing to the cost of the scheme; and the effects of the scheme on the health and welfare of the community. The report was tabled on 25 May 1972.

**Senate Standing Committee on Health and Welfare**

On 11 June 1970, the Senate created the Standing Committee on Health and Welfare. On 2 September 1970, the Senate resolved to refer to this Committee the problems of, and the provisions for assistance to, mentally and physically handicapped persons in Australia. The report of this Senate Standing Committee was tabled on 5 May 1971.

**STATE GOVERNMENT ACTIVITIES**

(Includes activities of the Commonwealth Government in the Northern Territory and the Australian Capital Territory)

**Public health legislation and administration**

For details of the administration of health services in each State, the Northern Territory and the Australian Capital Territory, *see* pages 543–50 of Year Book No. 53. For administrative changes which took place in 1969 and 1970, *see* Year Book Nos. 56 and 57 respectively. The following paragraphs refer briefly to recent administrative changes.

In *New South Wales*, as part of the planning for complete regionalisation of hospital services, all public hospitals have been tentatively allocated to seven country and three metropolitan regions. Regional offices of the Hospitals Commission have been established and are fully operational for five country and two metropolitan regions. Offices have been established but are not yet fully operational in respect of the remaining three regions.

The Central Cancer Registry commenced full operation as from 1 January 1972. A new building, housing the City Morgue, Division of Forensic Medicine and Coroner's Court was occupied during 1971, providing greatly improved facilities and services in this field as well as providing more comfortable and sympathetic surroundings for relatives and the public.

The Therapeutic Goods and Cosmetics Act was assented to on 22 March 1972, to regulate the manufacture, distribution and advertising of certain therapeutic goods and to impose standards in relation to such goods and cosmetics. The Act amends the Pure Food Act 1908, the Poisons Act 1966, and certain other Acts in certain respects. The Ambulance Service Act was assented to on 29 March 1972, to re-organise the provision of ambulance services throughout New South Wales; to constitute the New South Wales Ambulance Board and define its powers, duties and functions; to provide for the establishment of a contribution scheme; and to repeal the Ambulance Transport Service Act 1919.

The Private Hospitals (Amendment) Act was introduced transferring responsibility for administration of Private Hospitals and Nursing Homes from the Board of Health to the Hospitals Commission of New South Wales from 17 March 1972. The New South Wales Institute of Psychiatry Act was amended to make further provision in respect of the objects of the Institute; to vary the membership of the Institute and to permit the Institute to establish additional accounts. Amendments were made to the Dentists Act concerning the powers of inspectors, the registration of dentists and the authorisation of persons not entitled to registration to practise dentistry in certain cases or to be granted certificates of provisional registration. The Pharmacy Act was amended with respect to persons carrying on the business of a pharmacist or having a pecuniary interest in the business of a pharmacist. The Physiotherapists Act was also amended to make further provisions with respect to the powers of inspectors, under the Act and the registration of physiotherapists and to permit the legal representatives of a deceased physiotherapist to carry on the practice of that physiotherapist.

In *Victoria* the development of the Alcoholics and Drug Dependents Branch of the Health Department is progressing and the drug education facilities are continuing to expand under the Commonwealth-States arrangement.

The introduction of the *Health (Tuberculosis Arrangement) Act* 1971 continued the financial agreement between the Commonwealth and State Governments which has enabled Victoria to mount such an effective campaign against tuberculosis.

The *Dentists Act* 1972, which re-enacted the provisions of Part II of the *Medical Act* 1958, brought up to date the registration provision concerning dentists.

Other health measures introduced relate to the registration and supervision of pest control operators and the introduction of special regulations requiring warning labels as to the hazards of cigarette smoking to be attached to all cigarettes sold in Victoria.



In *Queensland*, the *Medical Act Amendment Act of 1971* was passed to enable medical practitioners who hold satisfactory qualifications gained in Canada to become eligible for registration in Queensland without further examination.

The *Health Act Amendment Act of 1971* increased the area and power of authority to control illicit and illegal use of dangerous drugs, prohibited plants, and implements used in connection with the drugs of addiction, with the important provisions of an offence for trafficking in dangerous drugs, as distinct from possession of these drugs. Emphasis was given to this trafficking offence with the declaration of harsher penalties including imprisonment.

### Supervision and care of infant life

Because the health of mothers and infants depends largely on pre-natal attention as well as after-care, government, local government and private organisations provide instruction and treatment for mothers before and after confinement. The health and well-being of mother and child are looked after by infant welfare centres, baby clinics, creches, etc.

In all States, Acts have been passed with the object of supervising the conditions of infant life and reducing the rate of mortality. (Information about infant mortality will be found in Chapter 8, *Vital Statistics*.) Stringent conditions regulate the adoption, nursing and maintenance of children placed in foster-homes by private persons.

Under the provisions of the *Social Services Act 1947-1972* maternity allowances provide financial assistance towards the expenses associated with the birth of children. Information about maternity allowances is given in Chapter 13, *Welfare Services*.

#### Nursing activities

Several State Governments maintain institutions which provide treatment for mothers and children and, in addition, subsidies are granted to various associations engaged in welfare work.

*Infant welfare centres.* The following table gives particulars of the activities of infant welfare centres for the year 1971. The figures relate to all centres, whether permanently staffed or on a temporary or part-time basis. Centres may be located at accommodation specially provided for this purpose, or at halls, schools, etc.

INFANT WELFARE CENTRES: STATES AND TERRITORIES, 1971

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld(a)</i>	<i>S.A.(a)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.(a)</i>	<i>A.C.T.</i>	<i>Aust.</i>
Number of centres(b)	440	730	284	287	88	111	20	40	2,000
Attendances at centres	1,157,877	1,627,988	534,994	303,214	276,056	155,195	30,116	80,963	4,166,403
Visits by nurses to homes	201,418	162,129	2,474	37,045	31,697	73,502	8,000	17,905	534,170
Visits by nurses to hospitals	64,371	26,611	33,272	n.a.	17,569	n.a.	1,856	104	n.a.

(a) Year ended 30 June 1971. (b) At end of year.

Mobile units are used to service centres in some States. In 1971, the numbers of units and centres served, included in the above table, were as follows: Victoria, 4 and 11; Queensland, 3 and 34; South Australia, 2 and 19; Western Australia, 4 and 42. The number of centres for Tasmania includes 13 areas visited by sisters in cars.

Since 1930, the number of attendances at the infant welfare centres has increased more than four-fold. The numbers of attendances at ten year intervals since 1930 were as follows: 1930, 919, 893; 1940, 2,035,299; 1950, 3,049,375; 1960, 3,482,383; and 1970, 4,010,906.

*Bush Nursing Association.* Treatment for mothers and children is also provided by the Bush Nursing Associations. The numbers of centres maintained by the Associations in 1971 were: New South Wales, 14; Victoria, 58; Queensland, 5; South Australia, 34; and Western Australia, 11. In Tasmania, all of the district nursing centres have been taken over by the nearest public hospital and are no longer distinct entities.

### Medical and dental inspection of school children

For details of the administration of school health services in each State, the Northern Territory, and the Australian Capital Territory, see *Year Book No. 55*, pages 458-61. Further information about the operation of the school medical and dental services is given in *State Year Books*. The following paragraphs summarise features common to most States.

Medical and dental inspection of school children is carried out in all States under the control of State health departments, and in the Northern Territory and the Australian Capital Territory under the control of the Commonwealth Department of Health. The school health services are available to both government and non-government schools in metropolitan areas and larger country towns. In some States, special arrangements are made for children attending schools in more remote country areas.

The aim of the school medical services is to medically examine all children at least once during their school careers, usually on entry into primary school. Review examinations or, in some States, tests of vision and hearing by school nurses, are conducted in upper-primary and lower-secondary grades. Parents or guardians are notified of any departure from normal health and advised to seek further attention if necessary.

The aim of the school dental services is to examine and give regular dental treatment to children. Usually, acceptance for treatment is limited to children in primary schools. Some school children are treated at hospital dental clinics. Aboriginal missions and orphanages are also visited by school dentists. The consent of a parent or guardian is necessary before treatment can be given. In some States, priority is given to children who live in areas beyond the easy reach of other dental services. Treatment in remote areas is facilitated by the use of travelling dental clinics.

The following table summarises school health services in the States and Territories. Uniform concepts and definitions have not been developed, so Australian totals have not been shown.

SCHOOL HEALTH SERVICES: STATES AND TERRITORIES, 1971

	N.S.W.	Vic.	Qld(a)	S.A.	W.A.	Tas.	N.T.(a)	A.C.T.
School medical services—								
Staff (b)—								
Medical officers . . .	67	41	3	11	8	12	4	3
School nurses . . .	95	44	32	13	24	30	7	6
Medical examinations—								
Children examined . . .	169,953	222,588	137,867	(c)83,951	43,033	(c)30,008	(d)12,446	20,382
Found with defects . . .	21,086	9,321	(e)8,898	(c)14,799	8,531	6,915	(f)900	1,425
School dental services—								
Number of dental clinics—								
Stationary . . .	10	3	..	18	14	27	n.a.	31
Mobile . . .	(g)19	15	(h)4	5	3	23	n.a.	1
Staff (b)—								
Dental officers . . .	34	31	18	24	18	20	n.a.	16
Dental assistants, therapists and nurses . . .	39	40	..	38	16	47	n.a.	33
Dental examinations—								
Children examined . . .	82,053	35,773	(i)31,952	24,667	61,241	42,541	18,097	18,716
Number treated . . .	20,014	30,684	(i)9,985	15,662	n.a.	n.a.	n.a.	14,910

(a) Year ended 30 June 1971. (b) Full-time and part-time. (c) Excludes some children tested for hearing and vision by school sisters. (d) Includes pre-school children. (e) Number of defects found. (f) Estimated. (g) There is also a dental team with the Royal Flying Doctor Service (based at Broken Hill). (h) In addition, portable dental equipment is possessed by 13 dental officers who function from departmental vehicles. (i) Only children who reside in more remote areas.

## HOSPITALS AND OTHER STATISTICS

This section provides statistical information on hospitals and nursing homes; notifiable diseases; a survey of chronic illnesses and impairments; and cremations. The institutions referred to under this heading are classified into the following groups: public hospitals and nursing homes; private hospitals and nursing homes; repatriation hospitals; hansenite hospitals; and mental health institutions. Statistics of quarantine stations, and of hospitals maintained by the Armed Services, are not included.

### Public hospitals and nursing homes

The statistics shown for public hospitals and nursing homes refer to the following institutions: *New South Wales*—all institutions which are under the authority of the New South Wales Hospitals Commission, and which receive a government subsidy during the year, and the six State hospitals and nursing homes under the control of the Department of Public Health; *Victoria*—all subsidised hospitals and subsidised hospitals for the aged under the authority of the Victorian Hospitals and Charities Commission, the McCulloch House Convalescent Home for Women, the Dental Hospital, one tuberculosis sanatorium, and the Peter MacCallum Clinic, but not the exotic diseases block at the Fairfield Hospital; *Queensland*—all hospitals and nursing homes open to all sectors of the public

and administered by the State Government or by District Hospital Boards and those administered by non-profit organisations but subsidised by the State Government to provide free hospitalisation in all beds; *South Australia*—all hospitals controlled and maintained by, or which receive a regular annual grant or subsidy for maintenance purposes from, the South Australian Government, and hospitals controlled and maintained by local government or semi-government authorities; *Western Australia*—all departmental and subsidised board hospitals, including the Perth Dental Hospital; *Tasmania*—all public hospitals designated as such by the Director-General of Health Services, together with three homes for the aged, and one chest hospital; *Northern Territory*—departmental hospitals at Darwin, Alice Springs, Tennant Creek, and Katherine; *Australian Capital Territory*—the Canberra Hospital and the Queen Elizabeth II Coronation Home for post-natal care.

A number of institutions classified by the Commonwealth Department of Health as 'public' hospitals or nursing homes are not included in the statistics of public hospitals and nursing homes: there were 95 such institutions at June 1970, with an approved bed capacity of 3,783.

#### Number, staff and accommodation

##### PUBLIC HOSPITALS AND NURSING HOMES: NUMBER, STAFF AND ACCOMMODATION, STATES AND TERRITORIES, JUNE 1970

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Number of hospitals and nursing homes	271	156	149	67	99	25	4	2	773
Medical staff—									
Salaried . . . . .	1,493	1,651	(a)593	381	306	183	33	40	4,680
Other(b) . . . . .	5,663	2,360	171	734	391	168	..	215	9,702
Nursing staff(c) . . . .	21,326	15,529	(a)8,308	5,772	4,880	2,311	463	694	59,283
Accommodation—									
Number of beds and cots . . . . .	28,190	17,564	14,609	5,099	7,082	3,063	692	659	76,958

(a) Full-time staff and full-time equivalent of part-time staff. (b) Includes honorary and visiting medical officers who may hold appointments at more than one hospital. (c) Qualified and student nurses, assistant nurses, assistant nurse trainees, nursing aides, and nursing aide trainees.

#### In-patients treated

The following table gives particulars of in-patients treated. The figures shown refer to cases, that is to say, a person who is admitted to hospital or nursing home twice during a year is counted twice. Newborn babies are excluded unless they remain in hospital or nursing home after their mothers' discharge.

##### PUBLIC HOSPITALS AND NURSING HOMES: IN-PATIENTS TREATED STATES AND TERRITORIES, 1969-70

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
In-patients at beginning of year—									
Males . . . . .	9,711	n.a.	4,760	1,672	2,211	958	282	n.a.	n.a.
Females . . . . .	12,188	n.a.	5,417	2,094	2,839	1,221	246	n.a.	n.a.
Persons . . . . .	21,899	13,758	10,177	3,766	5,050	2,179	528	569	57,926
Admissions and re-admissions during year—									
Males . . . . .	251,899	n.a.	119,744	58,480	67,274	18,708	7,730	n.a.	n.a.
Females . . . . .	372,187	n.a.	147,078	73,187	83,004	27,060	9,086	n.a.	n.a.
Persons . . . . .	624,086	362,237	266,822	131,667	150,278	45,768	16,816	21,063	1,618,737
Total in-patients (cases) treated—									
Males . . . . .	261,610	n.a.	124,504	60,152	69,485	19,666	8,012	n.a.	n.a.
Females . . . . .	384,375	n.a.	152,495	75,281	85,843	28,281	9,332	n.a.	n.a.
Persons . . . . .	645,985	375,995	276,999	135,433	155,328	47,947	17,344	21,632	1,676,663
Discharges and deaths—									
Males . . . . .	251,676	n.a.	119,383	58,421	67,158	18,710	7,733	n.a.	n.a.
Females . . . . .	371,561	n.a.	146,784	73,157	82,972	27,055	8,998	n.a.	n.a.
Persons . . . . .	623,237	362,012	266,167	131,578	150,130	45,765	16,731	21,222	1,616,842
In-patients at end of year—									
Males . . . . .	9,934	n.a.	5,121	1,731	2,327	956	277	n.a.	n.a.
Females . . . . .	12,814	n.a.	5,711	2,124	2,871	1,226	336	n.a.	n.a.
Persons . . . . .	22,748	13,983	10,832	3,855	5,198	2,182	613	410	59,821
Average daily number resident	21,311	13,354	9,810	3,685	4,922	2,115	500	558	56,255



In addition to those admitted to the hospitals and nursing homes, there are large numbers of out-patients treated. During 1969-70 there were approximately 2,074,000 out-patients treated in New South Wales, 920,000 in Victoria, 958,000 in Queensland, 187,000 in South Australia, 379,000 in Western Australia, 146,000 in Tasmania, 170,000 in the Northern Territory (includes two clinics) and 32,000 in the Australian Capital Territory, making an estimated total for Australia of 4,865,000. The figures quoted refer to cases, as distinct from persons and attendances.

### Revenue and expenditure

Details of revenue and expenditure for the year 1969-70 are shown in the next table. 'Government aid' includes municipal aid which was shown as a separate revenue item for some States in previous Year Books. Commonwealth pharmaceutical benefits and tuberculosis allowances paid direct to the institutions have also been included as 'government aid'.

Commonwealth hospital and nursing home benefits paid direct to public hospitals and nursing homes (in either full or part payment of fees incurred by pensioners and other uninsured patients) are treated on the same basis as Commonwealth benefits used to reimburse insured patients, and included in the amounts shown for 'fees'. Details of Commonwealth expenditure on each of the different categories of hospital benefits are shown on pages 423.

For some States, expenditure on capital items out of hospitals' own funds are not included in the figures shown. Comparison between the States should therefore be made with caution.

### PUBLIC HOSPITALS AND NURSING HOMES: REVENUE AND EXPENDITURE STATES AND TERRITORIES, 1969-70

(\$'000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Revenue—</b>									
Government aid . . . . .	116,856	75,714	(a)42,861	25,627	39,927	14,672	5,536	3,232	324,424
Public subscriptions, legacies, etc. . . . .	177	(b)8,158	830	1,385	24				10,574
Fees . . . . .	76,649	45,472	13,587	13,205	16,051	5,558	701	2,282	173,505
Other . . . . .	2,180	2,509	5,864	1,284	1,810	41		101	13,789
<b>Total revenue . . . . .</b>	<b>195,862</b>	<b>131,853</b>	<b>63,143</b>	<b>41,500</b>	<b>57,811</b>	<b>20,271</b>	<b>6,237</b>	<b>5,615</b>	<b>522,292</b>
<b>Expenditure—</b>									
Salaries and wages . . . . .	124,520	81,309	35,629	22,025	28,958	11,043	3,422	3,717	310,624
Upkeep and repair of buildings and grounds . . . . .	5,159	2,884	961	1,450	5,076	280	386	327	16,523
All other maintenance . . . . .	49,752	30,562	19,874	10,765	15,373	4,444	1,735	1,464	133,969
<b>Total maintenance . . . . .</b>	<b>179,431</b>	<b>114,755</b>	<b>56,464</b>	<b>34,240</b>	<b>49,408</b>	<b>15,767</b>	<b>5,543</b>	<b>5,508</b>	<b>461,116</b>
Capital . . . . .	18,284	15,778	6,416	6,025	8,548	4,305	693	227	60,276
<b>Total expenditure . . . . .</b>	<b>197,714</b>	<b>130,534</b>	<b>62,880</b>	<b>40,264</b>	<b>57,956</b>	<b>20,072</b>	<b>6,237</b>	<b>5,735</b>	<b>521,392</b>

(a) Excludes loans from semi-government authorities; these loans are included in 'other' revenue. (b) Includes transfers from hospital reserve accounts.

### Summary for Australia

A summary of statistics relating to public hospitals and nursing homes in Australia is given in the following table.

### PUBLIC HOSPITALS AND NURSING HOMES: AUSTRALIA, 1965-66 TO 1969-70

	1965-66	1966-67	1967-68	1968-69	1969-70
Hospitals and nursing homes . . . . .	766	765	762	768	773
<b>Medical staff—</b>					
Salaried . . . . .	3,967	4,125	4,487	4,874	4,680
Other(a) . . . . .	8,824	8,724	9,249	9,565	9,702
Nursing staff(b) . . . . .	47,656	49,640	52,236	55,219	59,283
Beds and cots . . . . .	71,226	73,748	74,768	75,242	76,958
Admissions . . . . .	1,395,519	1,439,959	1,500,662	1,572,225	1,618,737
Total in-patients (cases) treated . . . . .	1,447,900	1,494,709	1,554,331	1,626,998	1,676,663
Average daily number resident . . . . .	50,161	52,331	53,467	54,600	56,255
Out-patients (cases)(c) . . . . .	3,820,000	3,993,000	4,365,000	4,655,843	4,864,716
Revenue . . . . . \$'000	341,741	376,343	413,183	464,117	522,292
Expenditure . . . . . \$'000	341,007	377,457	411,869	460,393	521,392

(a) Includes honorary and visiting medical officers, who may hold appointments at more than one hospital.  
 (b) Qualified and student nurses, assistant nurses, assistant nurse trainees, nursing aides, and nursing aide trainees.  
 (c) Estimated.

### Private hospitals and nursing homes

The figures shown in the following table refer to those private hospitals and nursing homes which have been approved for the payment of Commonwealth hospital benefits under the *National Health Act* 1953-1971. A small number of institutions classified as 'private' by the Commonwealth Health Department are included in public hospital statistics, and these have been omitted from the following two tables. Statistical information about patients, staff and finance of these institutions is not available on a uniform Australia-wide basis.

#### PRIVATE HOSPITALS AND NURSING HOMES: STATES, 1966 TO 1970

State	30 June—				
	1966	1967	1968	1969	1970
NUMBER OF PRIVATE HOSPITALS AND NURSING HOMES					
New South Wales . . .	527	535	541	536	(a)546
Victoria . . .	309	313	310	311	313
Queensland . . .	149	152	155	156	163
South Australia(b) . . .	177	184	185	187	184
Western Australia . . .	95	96	102	104	105
Tasmania . . .	45	42	43	44	47
Australia . . .	1,302	1,322	1,336	1,338	1,358

#### NUMBER OF BEDS FOR PATIENTS

New South Wales . . .	14,503	15,825	17,016	18,377	(a)19,665
Victoria . . .	7,117	7,295	7,267	7,385	7,790
Queensland . . .	4,416	4,630	4,908	5,117	5,949
South Australia(b) . . .	4,166	4,361	4,542	4,778	4,908
Western Australia . . .	2,898	3,029	3,333	3,484	3,643
Tasmania . . .	1,033	1,038	1,084	1,160	1,294
Australia . . .	34,133	36,178	38,150	40,301	43,249

(a) Includes two institutions in the Australian Capital Territory. There were no institutions of this nature in the A.C.T. prior to 1970. (b) Includes one institution in the Northern Territory.

### Repatriation hospitals

The medical care of eligible ex-servicemen and dependants of deceased ex-servicemen is a major function of the Commonwealth Repatriation Department, which provides a comprehensive service.

In-patient treatment is provided at Repatriation General Hospitals in each capital city, at six auxiliary hospitals and at one sanatorium. In-patient treatment may also be provided in country hospitals at the Department's expense in certain circumstances. Mental patients requiring custodial care are, by agreement with the State Governments, accommodated at the expense of the Department in mental hospitals administered by the State authorities.

Details of patients, staff and expenditure on Repatriation institutions and other medical services are given in Chapter 5, Repatriation.

### Hansenide hospitals

There are four isolation hospitals in Australia for the care and treatment of persons suffering from Hansen's disease (leprosy). The numbers of isolation patients at these hospitals at 31 December 1971 were: Little Bay (New South Wales), 8; Fantome Island (North Queensland), 13; Derby (Western Australia), 129; and East Arm Settlement (Northern Territory), 7. In addition, there were 22 rehabilitation patients resident in the East Arm Settlement, mostly for the purpose of reconstructive surgery. With the exception of the Institute of Tropical Medicine at Little Bay, nursing services are provided mostly by sisters of religious orders under supervision of Government medical officers.

Special wards for the isolation and treatment of leprosy patients are also provided at other centres. The location of these wards and the number of isolation patients resident at 31 December 1971, were: Fairfield (Victoria), 4; Princess Alexandra Hospital (Queensland), 7.

### Mental health institutions

The presentation of meaningful statistics of mental health services has become increasingly difficult because of changes in recent years in the institutions and services for the care of mental patients. The emphasis has shifted from institutions for care of patients certified insane to a range of mental health services provided for in-patients and out-patients at psychiatric hospitals, admission and reception centres, day hospitals, out-patient clinics, training centres, homes for the mentally retarded and geriatric patients, psychiatric units in general hospitals, and the like.

To enable valid comparisons to be made of mental health statistics in each State the mental health authorities of all States have proposed standard statistical definitions and the statistical recording systems of all States are gradually being changed towards uniformity. Meanwhile certain limited information is available which is shown in the following paragraphs. Since a common measure has not yet been achieved, the figures for States should not be added to form Australian totals.

#### In-patient institutions

The following table shows the number of major in-patient institutions in each State in 1970, the accommodation they provide for patients, and their staff. In-patient care for voluntary patients is also provided at many general public and a number of private hospitals. There are also psychiatric units attached to gaols, juvenile corrective centres and similar institutions. Only the following institutions are included in this table: *New South Wales*—the fourteen State psychiatric centres (a psychiatric hospital and associated admission centre being regarded as one psychiatric centre) and the three authorised private psychiatric hospitals (several other institutions provide in-patient care for voluntary patients only, but are excluded from the scope of the statistics); *Victoria*—the three psychiatric hospitals, ten mental hospitals, eight informal hospitals, and nine intellectual deficiency training centres; *Queensland*—four psychiatric hospitals, three training centres, and one rehabilitation clinic; *South Australia*—two mental hospitals and three receiving centres; *Western Australia*—the three approved mental hospitals and two training centres; and *Tasmania*—the Royal Derwent hospital.

MENTAL HEALTH: IN-PATIENT INSTITUTIONS, ACCOMMODATION AND STAFF  
STATES AT 30 JUNE 1970

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.
In-patient institutions . . .	17	(a)30	8	5	5	1
Beds and cots for patients . . .	10,306	(b)9,127	3,621	2,086	1,539	1,030
Staff—Medical . . . . .	(c)278	(a)164	(d)34	39	27	(f)12
Nursing . . . . .	(e)3,600	(a)(e)3,021	1,362	728	617	344

(a) At 30 November 1970. (b) The number of beds and cots occupied on 30 November 1970. (c) Includes visiting specialists who are paid for their services. (d) Full-time staff and full-time equivalent of part-time staff. (e) Includes attendants. (f) Includes four part-time staff.

There are no separate in-patient institutions for mental patients in the Northern Territory or the Australian Capital Territory. With the appointment of a Director of Psychiatric Services the organisation of a psychiatric service was begun in the Australian Capital Territory in 1967–68.



## Patients

The following table sets out statistics of in-patients under the care of the respective State mental health services.

## IN-PATIENTS AT MENTAL HEALTH INSTITUTIONS, 1969-70

	N.S.W.	Vic.(a)(b)	Qld	S.A.	W.A.	Tas.
In-patients at beginning of year—						
Males . . . . .	6,140	(c)5,460	2,388	1,223	1,256	467
Females . . . . .	4,985	(c)4,898	1,454	1,060	871	463
Persons . . . . .	11,125	(c)10,358	3,842	2,283	2,127	930
Admissions and re-admissions during year—						
Males . . . . .	10,291	6,276	1,781	1,747	1,661	555
Females . . . . .	9,282	6,473	666	1,631	1,140	500
Persons . . . . .	19,573	12,749	2,447	3,378	2,801	1,055
Total in-patients (cases) treated—						
Males . . . . .	16,431	11,736	4,169	2,970	2,917	1,022
Females . . . . .	14,267	11,371	2,120	2,691	2,011	963
Persons . . . . .	30,698	23,107	6,289	5,661	4,928	1,985
Discharges, including deaths—						
Males . . . . .	10,668	6,309	1,818	1,755	1,518	538
Females . . . . .	9,693	6,424	663	1,637	1,116	479
Persons . . . . .	20,361	12,733	2,481	3,392	2,634	1,017
In-patients at end of year—						
Males . . . . .	5,763	5,427	2,351	1,215	1,399	484
Females . . . . .	4,574	4,947	1,457	1,054	895	484
Persons . . . . .	10,337	10,374	3,808	2,269	2,294	968

(a) Eleven months ended 30 November 1970.  
1 January 1970.

(b) Includes transfers from one institution to another.

(c) At

## State government expenditure on mental health services

The following figures show particulars of expenditure by States for the year 1969-70. Maintenance expenditure represents expenditure on wages and salaries, upkeep and repair of buildings and grounds, and other maintenance. The figure for New South Wales relates to the 14 State psychiatric centres and the Master in Protective Jurisdiction of the Supreme Court. Capital expenditure is expenditure as approved under the *State Grants (Mental Health Institutions) Act* 1964 only, and excludes the Commonwealth contributions paid under this Act—see page 433.

MENTAL HEALTH: EXPENDITURE, STATES, 1969-70  
(\$'000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	All States
Maintenance . . . . .	29,634	26,068	8,453	6,201	5,134	2,524	78,014
Capital . . . . .	4,564	1,893	1,203	2,598	482	215	10,957

## Notifiable diseases

*Methods of prevention and control.* Provision exists in the Health Acts of all States for the compulsory notification of certain infectious and other diseases and for the application of preventive measures. When any such disease occurs the local authority must be notified at once, and in some States notification must be made also to the Health Department.

As a rule, the local authorities are required to report from time to time to the Central Board of Health in each State on the health, cleanliness and general sanitary state of their several districts and on the appearance of certain diseases. Regulations provide for the disinfection and cleansing of premises and for the disinfection or destruction of bedding, clothing or other articles which have been exposed to infection. Regulations also provide that persons suspected to be suffering from, or to be carriers of, infectious disease must submit to clinical and laboratory examination. Persons suffering from certain diseases, for example, smallpox and leprosy, are detained in isolation.

*Notifiable diseases and cases notified, 1971.* The following table shows, by State and Territory, the number of cases notified in 1971 for those diseases notifiable in all States and Territories. In May 1965 the National Health and Medical Research Council at its Fifty-ninth Session proposed a basic list of diseases to be notifiable in each State and Territory, and this table is based upon that proposal. The table does not include all diseases which are notifiable in a State or Territory. Factors such as the following affect both the completeness of the figures and the comparability from State to State and from year to year: Availability of medical and diagnostic services; varying degrees of attention to notification of diseases; and enforcement and follow-up of notifications by Health Departments.

**NOTIFIABLE DISEASES(a): NUMBER OF CASES NOTIFIED  
STATES AND TERRITORIES, 1971**

<i>Disease</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Anthrax . . . . .	..	..	..	..	..	..	..	..	..
Brucellosis . . . . .	21	40	11	4	1	..	..	..	77
Cholera . . . . .	..	..	..	..	..	..	..	..	..
Diphtheria . . . . .	22	6	1	..	1	..	..	1	31
Gonorrhoea . . . . .	3,943	2,127	1,852	817	1,236	117	412	35	10,539
Infectious hepatitis(b) . . . . .	2,621	1,961	1,258	504	554	287	296	100	7,581
Hansen's disease (Leprosy) . . . . .	..	1	4	1	13	..	13	..	32
Leptospirosis . . . . .	17	2	68	..	..	10	..	..	97
Paratyphoid fever . . . . .	2	..	..	2	1	..	..	..	5
Poliomyelitis . . . . .	..	1	1	..	..	..	..	..	2
Syphilis . . . . .	362	102	200	122	256	10	20	5	1,077
Tetanus . . . . .	8	3	7	1	4	1	..	..	24
Tuberculosis(c) . . . . .	498	416	241	124	119	41	30	13	1,482
Typhoid . . . . .	16	11	5	2	1	..	1	..	36
Typhus (all forms) . . . . .	2	..	5	..	..	..	..	..	7

(a) No cases of plague, smallpox or yellow fever were notified. (b) Includes hepatitis, serum (homologous).  
 (c) Queensland figure includes erythema nodosum and pleural effusion.

*New infectious hepatitis cases notified.* The following table shows the number of cases of infectious hepatitis notified in each State and Territory during the years 1967 to 1971.

**INFECTIOUS HEPATITIS: CASES NOTIFIED  
STATES AND TERRITORIES, 1967 TO 1971**

<i>State or Territory</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>	<i>1971</i>
New South Wales . . . . .	4,032	2,526	2,820	2,851	2,621
Victoria . . . . .	2,991	2,362	2,364	2,401	1,961
Queensland(a) . . . . .	1,973	1,819	886	1,000	1,258
South Australia . . . . .	1,299	558	615	485	504
Western Australia . . . . .	190	147	146	166	554
Tasmania . . . . .	425	589	493	318	287
Northern Territory . . . . .	158	66	74	229	296
Australian Capital Territory . . . . .	248	56	52	118	100
<b>Australia . . . . .</b>	<b>11,316</b>	<b>8,123</b>	<b>7,450</b>	<b>7,568</b>	<b>7,581</b>

(a) Includes hepatitis, serum (homologous).

*New tuberculosis cases notified.* The following table gives particulars of the number of new cases of tuberculosis notified in Australia for 1971.

**TUBERCULOSIS: NEW CASES NOTIFIED(a)**  
**STATES AND TERRITORIES, 1971**

State or Territory	Age group (years)					Total
	0-14	15-34	35-54	55 and over	Not stated	
New South Wales . . .	20	86	179	210	3	498
Victoria . . .	39	90	151	135	1	416
Queensland . . .	8	38	80	113	2	241
South Australia . . .	15	26	38	45	..	124
Western Australia . . .	10	24	39	46	..	119
Tasmania . . .	2	12	16	11	..	41
Northern Territory . . .	..	14	8	8	..	30
Australian Capital Territory	2	6	2	3	..	13
<b>Australia . . .</b>	<b>96</b>	<b>296</b>	<b>513</b>	<b>571</b>	<b>6</b>	<b>1,482</b>

(a) Figures supplied by the Director of Tuberculosis in each State and the Commonwealth Department of Health.

### Chronic illnesses, injuries, and impairments

As part of the quarterly population survey (see Chapter 20, Employment and Unemployment) a survey was conducted in May 1968, in all States except Victoria, in order to obtain estimates of the incidence of chronic illnesses, injuries and impairments in the population, the nature of these conditions and their cause (e.g. whether they were congenital or due to war, accident, etc.). In addition, the survey obtained information on the effect of these conditions on the activities of those who suffered from them.

Estimates derived from the survey were published in a mimeographed bulletin *Chronic Illnesses, Injuries and Impairments, May 1968* (Ref. No. 17.3). A summary of the principal results is given in the Appendix to Year Book No. 56.

### Disposal of dead by cremation

The first crematorium in Australia was opened in South Australia in 1903. At 31 December 1971 there were twenty-six crematoria in Australia, situated as follows: New South Wales, 13; Victoria, 4; Queensland, 5; South Australia, 2; Western Australia, 2; Tasmania, 2; Australian Capital Territory, 1. There is no crematorium in the Northern Territory. The following table shows the number of cremations and total deaths in each State and Territory for each of the years 1967 to 1971.

**CREMATIONS AND TOTAL DEATHS: STATES AND TERRITORIES(a), 1967 TO 1971**

State or Territory	1967		1968		1969		1970		1971	
	Cremations	Total deaths	Cremations	Total deaths	Cremations	Total deaths	Cremations	Total deaths	Cremations	Total deaths
New South Wales . . .	17,486	39,613	18,749	41,803	18,564	40,655	20,087	43,601	19,966	41,691
Victoria . . .	10,173	28,373	10,939	29,967	10,617	28,976	11,265	30,335	11,134	30,598
Queensland . . .	5,156	14,736	5,686	16,078	5,733	15,786	6,303	17,055	6,203	16,339
South Australia . . .	2,076	9,071	2,476	9,916	2,464	9,337	2,884	10,138	2,917	9,686
Western Australia . . .	2,448	6,779	2,548	7,470	2,590	7,350	2,826	7,543	2,996	7,806
Tasmania . . .	1,019	3,228	1,049	3,284	1,066	3,309	1,039	3,174	1,157	3,295
Northern Territory . . .	..	527	..	543	..	485	..	608	..	637
Australian Capital Territory . . .	180	376	235	488	309	588	338	594	341	598
<b>Australia . . .</b>	<b>38,538</b>	<b>102,703</b>	<b>41,682</b>	<b>109,549</b>	<b>41,343</b>	<b>106,486</b>	<b>44,742</b>	<b>113,048</b>	<b>44,714</b>	<b>110,650</b>

(a) Cremations are not necessarily carried out in the State or Territory where the death was registered.



## CHAPTER 15

### LAW, ORDER, AND PUBLIC SAFETY

This chapter provides summary information about criminal and civil court proceedings (including divorce and bankruptcy); selected crime reported or becoming known to the police; police strengths; prisons; expenditure on law and order; fire brigades; and patents, trademarks and copyright. The main sources of further information for individual States are the State Year Books and Statistical Registers, and the annual reports of the relevant justice authorities. *See also* Year Book No. 55, 1969, page 456, for short descriptions of the National Safety Council of Australia, lifesaving organisations, the Royal Humane Society and the Order of St. John.

The statistics in this chapter are influenced by a number of factors which affect comparability from State to State and from year to year, such as differences in the jurisdiction of courts; changes in the law in particular States and differences in the laws between States; differences in the methods of compiling the figures (e.g. in respect of persons convicted for more than one offence); the prevailing attitude to laws such as those connected with liquor, vagrancy, gaming, and traffic offences; and the strength and distribution of the police forces.

Details of the development and structure of the State, Territory, and Commonwealth legal systems are given in Year Book No. 55, pages 565–7 and Year Book No. 56, page 441. The only notable changes since then occurred in South Australia and New South Wales. In South Australia the Local Courts Act Amendment Act, 1969 came into effect on 20 August 1970. It provides for the establishment of District Criminal Courts. Provision has been made for the division of the State into districts and for the appointment by the Senior Judge, of judges known as Recorders, to courts in each of these Districts. Under the Act the District Court has the jurisdiction and powers of the Supreme Court in respect of indictable offences except for capital offences and for felonies and misdemeanors where the maximum punishment is imprisonment exceeding ten years.

In New South Wales the Supreme Court Act, 1970 came into force on 1 July 1972. The Act provides for the concurrent administration of law and equity in the Supreme Court which will have the effect of bringing the New South Wales civil procedure in the Supreme Court in line with the other Australian States which have had concurrent administration from as early as 1876. Equitable reliefs and defences which could formerly only be pleaded in the Supreme Court exercising jurisdiction in equity can now be heard together with common law claims and defences in the one jurisdiction. The general scope of the Act will enable a suitor to obtain by one proceeding the same ultimate result as he would previously have obtained either by having selected the right jurisdiction or after having been to each jurisdiction in succession. The Law Reform (Law and Equity) Act, 1972 which, also commenced on 1 July 1972, provides that if any conflict or variance arises between the rules of equity and common law with reference to the same matter, the rules of equity will prevail. This principle extends, where applicable, to the inferior courts.

#### Lower (magistrates') courts

Particulars of the powers of magistrates, and of special provisions for dealing with juvenile offenders in special courts in the various States and Territories are given in Year Book No. 55, pages 567 to 571. The statistics in the following tables are influenced by the factors listed at the beginning of this chapter and, in particular by differences in the jurisdiction of lower courts in the various States.

#### Criminal proceedings

The number of charges heard at magistrates' courts in each State and Territory in the years 1966 to 1970 are given in the following table. The statistics relate to individual offences for which persons were charged, except for Queensland where proceedings against a person for a number of offences at the one hearing are counted as one charge.

**MAGISTRATES' COURTS(a): CHARGES HEARD, STATES AND TERRITORIES  
1966 TO 1970(b)**

<i>State or Territory</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>
New South Wales . . . .	338,808	336,746	337,540	361,377	390,233
Victoria . . . . .	307,465	318,172	326,445	341,284	339,019
Queensland(c)(d) . . . .	111,743	95,155	100,046	107,375	110,803
South Australia(c) . . . .	83,080	98,588	117,081	118,877	125,867
Western Australia . . . .	66,863	76,458	86,836	93,157	88,940
Tasmania . . . . .	37,624	36,550	35,077	32,587	32,880
Northern Territory . . . .	(e)7,961	10,336	10,459	(f)13,153	14,695
Australian Capital Territory .	9,025	7,318	7,647	6,685	(g)10,326
<b>Australia . . . . .</b>	<b>962,569</b>	<b>979,323</b>	<b>1,021,131</b>	<b>1,074,495</b>	<b>1,112,763</b>

(a) Includes Children's Court, except for Darwin Children's Court in the Northern Territory prior to 1970. (b) Excludes minor traffic offences settled without court proceedings. (c) Year ended 30 June. (d) A person charged on several counts at the one hearing is included only once. (e) Excludes courts at Tennant Creek and Katherine. (f) Excludes court at Tennant Creek. (g) Includes remand cases, adjournments and court orders not collected in previous years.

Differences between States in the preceding table, and within States over a period of time, are influenced by the large number of traffic offences and the arrangements which have been introduced at various times for dealing with them. Provision exists in the States and the internal Territories for settlement of parking and minor traffic offences by payment of fines without court proceedings. The numbers involved are shown in the next table.

**MINOR TRAFFIC OFFENCES SETTLED BY PAYMENT OF FINES  
WITHOUT COURT PROCEEDINGS, STATES AND TERRITORIES 1966 TO 1970**

<i>State or Territory</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>
New South Wales . . . .	464,122	411,447	426,496	418,626	456,798
Victoria . . . . .	313,529	343,432	410,857	443,222	477,332
Queensland(a) . . . . .	209,417	264,617	253,429	236,347	235,471
South Australia(a) . . . .	240,359	240,014	239,619	267,709	244,120
Western Australia . . . .	64,842	62,827	83,146	117,436	154,307
Tasmania . . . . .	50,914	45,081	55,677	56,076	62,408
Northern Territory(b) . . .	n.a.	n.a.	n.a.	n.a.	8,438
Australian Capital Territory .	4,590	6,765	4,430	4,340	5,282
<b>Total . . . . .</b>	<b>1,347,773</b>	<b>1,374,183</b>	<b>1,473,654</b>	<b>1,543,756</b>	<b>1,644,156</b>

(a) Year ended 30 June. (b) No provision for settlement of parking and minor traffic offences by payment of fines without court proceedings existed in the Northern Territory prior to 1970.

The following tables show the number of cases dealt with in magistrates' courts in which convictions were made.

**CASES AT MAGISTRATES' COURTS(a) IN WHICH CONVICTIONS WERE MADE, BY  
CLASS OF OFFENCE: STATES AND TERRITORIES, 1970**

<i>Class of offence</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld (b)(c)</i>	<i>S.A. (b)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Against the person . . . .	4,783	4,117	859	983	1,398	602	442	96	13,280
Against property . . . . .	34,931	28,387	6,666	6,331	14,459	2,942	921	615	95,252
Forgery and offences against the currency . . . .	928	521	..	35	68	269	154	18	1,993
Against good order . . . . .	80,060	33,065	34,166	14,282	17,997	1,606	7,355	575	189,106
Other(d) . . . . .	216,861	228,464	49,507	92,868	45,977	21,152	4,656	5,316	664,801
<b>Total . . . . .</b>	<b>337,563</b>	<b>294,554</b>	<b>91,198</b>	<b>114,499</b>	<b>79,899</b>	<b>26,571</b>	<b>13,528</b>	<b>6,620</b>	<b>964,432</b>

(a) Includes Children's Courts. (b) Year ended 30 June. (c) A person convicted on several counts at the one hearing is included only once. (d) Includes traffic offences other than minor traffic offences settled without court proceedings.

**CASES AT MAGISTRATES' COURTS<sup>(a)</sup> IN WHICH CONVICTIONS WERE MADE  
STATES AND TERRITORIES<sup>(b)</sup>, 1966 TO 1970**

<i>State or Territory</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>
New South Wales . . .	299,780	297,697	290,616	309,297	337,563
Victoria . . .	279,631	286,316	291,821	297,574	294,554
Queensland <sup>(c)(d)</sup> . . .	98,214	82,271	85,363	89,041	91,198
South Australia <sup>(c)</sup> . . .	71,694	87,110	105,027	105,966	114,499
Western Australia . . .	63,489	72,798	81,892	85,956	79,899
Tasmania . . .	32,414	31,525	30,100	26,515	26,571
Northern Territory . . .	<sup>(e)</sup> 7,402	9,437	9,416	<sup>(f)</sup> 12,087	13,528
Australian Capital Territory . . .	7,793	6,021	6,947	5,681	6,620
<b>Australia . . .</b>	<b>860,417</b>	<b>873,175</b>	<b>901,182</b>	<b>932,117</b>	<b>964,432</b>

<sup>(a)</sup> Includes Children's Courts except for Darwin Children's Court in the Northern Territory prior to 1970. <sup>(b)</sup> Excludes minor traffic offences settled without court proceedings. <sup>(c)</sup> Year ended 30 June. <sup>(d)</sup> A person convicted on several counts at the one hearing is included only once. <sup>(e)</sup> Excludes courts at Tennant Creek and Katherine. <sup>(f)</sup> Excludes court at Tennant Creek.

The number of cases in which convictions for drunkenness were recorded during each of the years 1966 to 1970 are given in the following table.

**DRUNKENNESS CASES<sup>(a)</sup> IN WHICH CONVICTIONS WERE MADE  
STATES AND TERRITORIES, 1966 TO 1970**

<i>State or Territory</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>
New South Wales . . .	56,159	55,134	57,710	59,048	58,606
Victoria . . .	24,279	23,855	24,338	25,582	25,054
Queensland <sup>(b)(c)</sup> . . .	28,791	29,530	28,409	28,140	31,259
South Australia <sup>(b)</sup> . . .	7,334	6,109	6,889	7,528	9,650
Western Australia . . .	9,033	10,722	11,146	11,970	12,612
Tasmania . . .	461	481	501	598	541
Northern Territory . . .	<sup>(d)</sup> 3,231	4,598	5,216	<sup>(e)</sup> 6,299	6,675
Australian Capital Territory . . .	377	313	316	388	572
<b>Australia . . .</b>	<b>129,665</b>	<b>130,742</b>	<b>134,525</b>	<b>139,553</b>	<b>144,969</b>

<sup>(a)</sup> Includes Children's Courts except for Darwin Children's Court in the Northern Territory prior to 1970. <sup>(b)</sup> Year ended 30 June. <sup>(c)</sup> A person convicted on several counts at the one hearing is included only once. <sup>(d)</sup> Excludes courts at Tennant Creek and Katherine. <sup>(e)</sup> Excludes court at Tennant Creek.

**Convictions for certain serious offences at lower (magistrates') courts**

The figures given in the preceding tables refer to all convictions, and include offences of a technical nature, drunkenness, and minor breaches of good order, which come under the heading of crime in a very different sense from the more serious offences. The following table has therefore been prepared to show convictions at magistrates' courts for the years 1966 to 1970 for offences against the person, offences against property, forgery, and offences against the currency.

**CONVICTIONS FOR CERTAIN SERIOUS OFFENCES<sup>(a)</sup> AT MAGISTRATES'  
COURTS<sup>(b)</sup>: STATES AND TERRITORIES, 1966 TO 1970**

<i>State or Territory</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>
New South Wales . . .	34,911	35,809	37,367	40,583	40,642
Victoria . . .	25,804	27,355	26,338	30,286	33,025
Queensland <sup>(c)(d)</sup> . . .	6,900	6,789	6,604	6,865	7,525
South Australia <sup>(c)</sup> . . .	5,085	5,180	5,817	6,678	7,349
Western Australia . . .	9,357	10,207	12,065	13,622	15,925
Tasmania . . .	3,285	3,278	3,650	3,597	3,813
Northern Territory . . .	<sup>(e)</sup> 647	818	941	<sup>(f)</sup> 1,307	1,517
Australian Capital Territory . . .	761	895	1,133	970	729
<b>Australia . . .</b>	<b>86,750</b>	<b>90,331</b>	<b>93,915</b>	<b>103,908</b>	<b>110,525</b>

<sup>(a)</sup> Offences against the person, offences against property, forgery, and offences against the currency. <sup>(b)</sup> Includes Children's Courts except for Darwin Children's Court in the Northern Territory prior to 1970. <sup>(c)</sup> Year ended 30 June. <sup>(d)</sup> A person convicted on several counts at the one hearing is included only once. <sup>(e)</sup> Excludes courts at Tennant Creek and Katherine. <sup>(f)</sup> Excludes court at Tennant Creek.



**Committals to higher (judges') courts**

In the case of other than minor offences a preliminary hearing is held before a stipendiary magistrate or justice of the peace for the purpose of determining whether a *prima facie* case has been made out. If the magistrate or justice of the peace finds that there is a case to answer, the person charged is committed for trial at a higher court. The numbers of such committals are shown in the following tables.

**COMMITTALS TO HIGHER COURTS(a), BY CLASS OF OFFENCE: STATES AND TERRITORIES, 1970**

<i>Class of offence</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i> <i>(b)(c)</i>	<i>S.A.</i> <i>(b)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Against the person .	2,105	1,448	394	307	136	156	41	51	4,638
Against property .	6,368	3,716	1,322	409	1,007	810	57	201	13,890
Forgery and offences against the currency .	435	747	1	14	50	40	31	11	1,329
Against good order .	162	42	8	8	21	1	15	..	257
Other .	103	493	8	4	56	5	7	15	691
<b>Total</b> .	<b>9,173</b>	<b>6,446</b>	<b>1,733</b>	<b>742</b>	<b>1,270</b>	<b>1,012</b>	<b>151</b>	<b>278</b>	<b>20,805</b>

(a) Includes committals from Children's Courts.  
counts at the one hearing is included only once.

(b) Year ended 30 June.

(c) A person committed on several

**COMMITTALS TO HIGHER COURTS(a): STATES AND TERRITORIES  
1966 TO 1970**

<i>State or Territory</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>
New South Wales .	8,758	7,954	8,229	9,793	9,173
Victoria .	5,308	5,655	6,192	5,515	6,446
Queensland(b)(c) .	1,614	1,611	1,428	1,579	1,733
South Australia(b) .	737	713	726	749	742
Western Australia .	523	609	1,037	950	1,270
Tasmania .	486	549	716	747	1,012
Northern Territory .	(d)127	176	196	(e)232	151
Australian Capital Territory .	137	170	240	219	278
<b>Australia</b> .	<b>17,690</b>	<b>17,437</b>	<b>18,764</b>	<b>19,784</b>	<b>20,805</b>

(a) Includes committals from Children's Courts, except for Darwin Children's Court in the Northern Territory prior to 1970. (b) Year ended 30 June. (c) A person committed on several counts at the one hearing is included only once. (d) Excludes courts at Tennant Creek and Katherine. (e) Excludes court at Tennant Creek.

**Higher (judges') courts**

Higher courts are presided over by a judge, sometimes with a jury. The general jurisdiction of the higher courts in the States and Territories, which for this purpose include District, County and Supreme Courts, includes appeals from the lower courts, cases of serious crime committed for trial or sentence by lower courts, and civil cases involving common law, commercial causes, equity, etc. Under the Commonwealth *Matrimonial Causes Act* 1959-1966, the Supreme Courts of the various States and Territories have exclusive jurisdiction in matrimonial causes, and under the *Bankruptcy Act* 1966-1969, the Federal Court of Bankruptcy, the Supreme Courts of New South Wales, Queensland, Western Australia, Tasmania and the Northern Territory, and the Courts of Insolvency in Victoria and South Australia, can deal with bankruptcy cases. However, the Federal Court handles bankruptcy cases in New South Wales and Victoria.

Proceedings at higher courts include therefore criminal, civil, divorce, and bankruptcy proceedings. Separate details of all except civil proceedings are given in the following paragraphs.

**Criminal proceedings**

The statistics in the following tables are influenced by the factors listed in the second paragraph at the beginning of this chapter.

**PERSONS CONVICTED<sup>(a)</sup> AT HIGHER COURTS: BY NATURE OF OFFENCE: STATES  
AND TERRITORIES, 1970**

<i>Offence</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld(b)</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>Against the person—</b>									
Murder . . . . .	21	14	2	6	7	3	1	..	54
Attempted murder . . . . .	3	6	..	..	..	..	..	..	9
Manslaughter(c) . . . . .	24	17	16	7	16	5	2	1	88
Culpable driving . . . . .	57	10	25	3	4	12	1	2	114
Rape . . . . .	36	27	9	6	6	4	2	..	90
Other offences against females . . . . .	359	260	94	126	7	43	16	8	913
Abduction . . . . .	1	9	1	..	4	1	..	..	16
Unnatural offences . . . . .	96	77	15	25	6	17	1	3	240
Abortion and attempt to procure . . . . .	2	5	6	2	1	..	..	..	16
Bigamy . . . . .	10	4	2	2	5	..	..	..	23
Malicious wounding and aggravated assault . . . . .	168	52	55	16	20	2	2	10	325
Common assault . . . . .	62	43	12	4	14	4	4	..	143
Other offences against the person . . . . .	20	6	12	19	4	2	6	2	71
<i>Total, against the person</i> . . . . .	<i>859</i>	<i>530</i>	<i>249</i>	<i>216</i>	<i>94</i>	<i>93</i>	<i>35</i>	<i>26</i>	<i>2,102</i>
<b>Against property—</b>									
Burglary, breaking and entering . . . . .	1,408	385	750	328	447	131	24	37	3,510
Robbery and stealing from the person . . . . .	245	151	47	24	27	66	5	10	575
Embezzlement and larceny by servants . . . . .	102	58	9	8	14	..	..	8	199
Other larceny(d) . . . . .	769	190	214	21	24	..	6	1	1,225
Receiving . . . . .	164	36	57	16	25	12	3	1	314
Fraud and false pretences . . . . .	111	62	19	14	7	13	3	3	232
Arson . . . . .	17	9	30	2	8	5	..	1	72
Malicious damage . . . . .	6	15	3	1	2	..	..	2	29
Other offences against property . . . . .	24	..	17	7	1	..	1	..	50
<i>Total, against property</i> . . . . .	<i>2,846</i>	<i>906</i>	<i>1,146</i>	<i>421</i>	<i>555</i>	<i>227</i>	<i>42</i>	<i>63</i>	<i>6,206</i>
Forgery and offences against the currency . . . . .	44	82	2	13	7	8	5	5	166
Against good order . . . . .	7	3	4	..	..	1	..	..	15
Other . . . . .	48	231	1	44	37	8	5	2	376
<b>Grand total</b> . . . . .	<b>3,804</b>	<b>1,752</b>	<b>1,402</b>	<b>694</b>	<b>693</b>	<b>337</b>	<b>87</b>	<b>96</b>	<b>8,865</b>

(a) A person convicted on several counts at the one hearing is classified according to the most serious offence and is included only once. (b) Year ended 30 June. (c) Includes causing death by dangerous driving. (d) Includes unlawfully using vehicles.

**PERSONS CONVICTED<sup>(a)</sup> AT HIGHER COURTS: STATES AND  
TERRITORIES, 1966 TO 1970**

<i>State or Territory</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>
New South Wales . . . . .	3,201	3,126	3,254	3,609	3,804
Victoria . . . . .	1,725	1,786	1,790	1,689	1,752
Queensland(b) . . . . .	1,330	1,279	1,160	1,610	1,402
South Australia . . . . .	738	707	692	712	694
Western Australia . . . . .	302	357	507	518	693
Tasmania . . . . .	204	254	243	292	337
Northern Territory . . . . .	58	65	88	120	87
Australian Capital Territory . . . . .	67	69	86	68	96
<b>Australia</b> . . . . .	<b>7,625</b>	<b>7,643</b>	<b>7,820</b>	<b>8,618</b>	<b>8,865</b>

(a) See footnote (a) in table above. (b) Year ended 30 June.

**Capital punishment**

There were no executions in Australia in 1971. For a brief account of the law relating to capital punishment in Australia, see Year Book No. 55, page 573.

### Divorce and other matrimonial causes

A description of Commonwealth legislation governing divorce and other matrimonial causes in Australia is contained in Year Book No. 55, page 580. Under this legislation a court may grant decrees of dissolution of marriage (divorce), nullity of marriage, judicial separation, restitution of conjugal rights, and rectification of marriage (i.e., that a person should refrain from making a false claim that a marriage has taken place between him and another person). Orders may be made for maintenance, the custody and welfare of children, and settlement of property, and damages for adultery. The following statistics refer only to petitions for, and decrees of, dissolution, nullity, and judicial separation. Detailed statistics are published in the annual and quarterly *Divorce* bulletins (13.1 and 13.2), and the annual *Demography* bulletin (4.9).

#### Petitions filed

Statistics of petitions exclude cross-petitions contained in answers by respondents. The following table shows the number of petitions for dissolution of marriage, nullity of marriage, and judicial separation filed in each State and Territory during 1971.

PETITIONS FILED FOR DISSOLUTION, NULLITY, AND JUDICIAL SEPARATION  
STATES AND TERRITORIES, 1971

Petition for—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Dissolution—</b>									
By husband . . .	2,746	1,631	736	622	673	221	63	115	6,807
By wife . . .	4,877	2,611	1,176	1,026	778	261	47	164	10,940
Total . . .	7,623	4,242	1,912	1,648	1,451	482	110	279	17,747
<b>Nullity—</b>									
By husband . . .	10	3	1	1	1	..	..	..	16
By wife . . .	31	10	4	4	2	6	..	1	58
Total . . .	41	13	5	5	3	6	..	1	74
<b>Dissolution or nullity—</b>									
By husband . . .	1	7	..	1	..	..	..	..	9
By wife . . .	8	7	3	1	..	..	..	..	19
Total . . .	9	14	3	2	..	..	..	..	28
<b>Judicial separation—</b>									
By husband . . .	..	..	..	1	..	..	..	..	1
By wife . . .	18	2	3	8	..	..	..	1	32
Total . . .	18	2	3	9	..	..	..	1	33
<b>All petitions—</b>									
By husband . . . No.	2,758	1,641	737	627	674	221	63	115	(a)6,836
per cent	36	38	38	38	46	45	57	41	38
By wife . . . No.	4,934	2,630	1,186	1,041	780	267	47	166	(b)11,051
per cent	64	62	62	62	54	55	43	59	62
<b>Grand total . . .</b>	<b>7,692</b>	<b>4,271</b>	<b>1,923</b>	<b>1,668</b>	<b>1,454</b>	<b>488</b>	<b>110</b>	<b>281</b>	<b>(c)17,887</b>

(a) Includes 3 petitions for dissolution or judicial separation. (b) Includes 2 petitions for dissolution or judicial separation. (c) Includes 5 petitions for dissolution or judicial separation.



**Decrees granted**

Statistics of decrees granted refer to decrees *nisi* made absolute except for the following cases, where no decree *nisi* is granted.

- (i) Decrees of judicial separation, which do not dissolve the marriage and may be discharged on resumption of cohabitation.
- (ii) Decrees of nullity of void marriage, as distinct from nullity of voidable marriage. A void marriage is invalid because of failure to meet a legal requirement, and the original decree of nullity is final. A valid marriage is voidable on proof of one or more of the grounds set out in Section 21 of the *Matrimonial Causes Act 1959-1966*, e.g. that either party is incapable of consummating the marriage.

The following tables show the number of dissolutions of marriage, nullities of marriage, and judicial separations granted in each State and Territory during 1971 classified according to petitioner, and the grounds on which decrees were granted during the years 1967 to 1971.

**DECREES FOR DISSOLUTION, NULLITY, AND JUDICIAL SEPARATION  
STATES AND TERRITORIES, 1971**

Decree of—		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Dissolution—										
To husband . . .		1,956	1,190	527	473	486	196	35	72	4,935
To wife . . .		3,502	1,878	877	791	577	233	20	120	7,998
To both . . .		9	4	..	..	1	..	..	..	14
Total . . .		5,467	3,072	1,404	1,264	1,064	429	55	192	12,947
Nullity—										
To husband . . .		5	2	..	4	1	1	..	..	13
To wife . . .		11	4	7	4	1	1	2	..	30
Total . . .		16	6	7	8	2	2	2	..	43
Judicial separation—										
To husband . . .		..	..	..	1	..	1	..	..	2
To wife . . .		4	1	..	2	2	..	..	1	10
Total . . .		4	1	..	3	2	1	..	1	12
All decrees—										
To husband . . .	No.	1,961	1,192	527	478	487	198	35	72	4,950
	per cent	36	39	37	38	46	46	61	37	38
To wife . . .	No.	3,517	1,883	884	797	580	234	22	121	8,038
	per cent	64	61	63	63	54	54	39	63	62
To both . . .	No.	9	4	..	..	1	..	..	..	14
Grand total . . .		5,487	3,079	1,411	1,275	1,068	432	57	193	13,002

**DECREES FOR DISSOLUTION, NULLITY, AND JUDICIAL  
SEPARATION GROUNDS, AUSTRALIA, 1967 TO 1971**

<i>Ground</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>	<i>1971</i>
<b>DISSOLUTION</b>					
Single grounds—					
Desertion . . . .	4,398	4,863	4,730	5,098	5,076
Adultery . . . .	2,270	2,611	2,916	3,419	3,977
Separation . . . .	1,868	1,959	1,758	2,023	2,243
Cruelty . . . .	550	670	750	942	983
Drunkenness . . . .	128	150	136	142	165
Failure to pay maintenance	3	10	8	3	1
Non-compliance with res- titution decree . . . .	5	5	5	2	1
Refusal to consummate . .	30	39	32	42	29
Insanity . . . .	7	7	7	6	3
Frequent convictions . . .	12	18	18	25	15
Imprisonment . . . .	7	4	3	3	8
Other single grounds . . .	10	17	11	17	23
Dual grounds—					
Desertion and adultery . .	76	68	102	90	87
Desertion and separation . .	68	88	145	96	79
Desertion and cruelty . . .	50	44	77	59	49
Desertion and drunkenness .	24	16	8	14	10
Desertion and failure to pay maintenance . . . .	4	6	5	3	6
Desertion and other . . . .	5	5	4	7	5
Adultery and separation . .	9	1	3	4	3
Adultery and cruelty . . .	12	12	16	17	14
Adultery and other . . . .	3	2	2	2	1
Separation and other . . . .	5	1	2	3	..
Cruelty and drunkenness . .	126	118	143	160	146
Cruelty and other . . . .	..	2	7	5	1
Other dual grounds . . . .	2	2	3	1	8
Three grounds or more . . .	16	13	39	15	14
<i>Total . . . . .</i>	<i>9,688</i>	<i>10,731</i>	<i>10,930</i>	<i>12,198</i>	<i>12,947</i>
<b>NULLITY</b>					
Bigamy . . . .	15	18	14	15	23
Invalid marriage . . . .	5	2	1	..	1
Incapacity to consummate .	27	23	28	29	15
Other grounds . . . .	4	1	3	1	4
<i>Total . . . . .</i>	<i>51</i>	<i>44</i>	<i>46</i>	<i>45</i>	<i>43</i>
<b>JUDICIAL SEPARATION</b>					
Desertion . . . .	1	1	..	..	1
Adultery . . . .	5	9	1	3	2
Cruelty . . . .	2	3	5	..	5
Other grounds . . . .	..	3	2	3	4
<i>Total . . . . .</i>	<i>8</i>	<i>16</i>	<i>8</i>	<i>6</i>	<i>12</i>
<b>ALL DECREES</b>					
<i>Grand total. . . . .</i>	<i>9,747</i>	<i>10,791</i>	<i>10,984</i>	<i>12,249</i>	<i>13,002</i>

**Divorced persons at each census, 1911 to 1966**

The following table shows the number and proportion of divorced persons in Australia as recorded from returns supplied at each census from 1911 to 1966. A classification of divorced persons by ages for the censuses from 1891 to 1947 appeared in earlier issues of the Year Book (*see* No. 39, page 269). Before 1911 no record was made of divorced persons in South Australia, so comparisons cannot be made beyond that date.

**DIVORCED PERSONS AT CENSUS DATES: AUSTRALIA, 1911 TO 1966**

Sex	Number							Number per 10,000 of males or females 15 years of age and over						
	1911	1921	1933	1947	1954	1961	1966	1911	1921	1933	1947	1954	1961	1966
Males .	2,368	4,233	10,298	25,052	32,389	38,640	42,885	15	23	42	89	100	105	105
Females .	2,140	4,304	10,888	27,516	36,650	43,339	51,143	15	24	46	96	115	119	125

**Bankruptcy**

For a description of the provisions of the *Bankruptcy Act* 1966–1969, *see* Year Book No. 55, pages 586–7. The Bankruptcy Act was amended in 1970 to remove any obstacle the Act may present to the operation of compositions or schemes of arrangement entered into under State or Territory legislation providing assistance to farmers in respect of their debts.

**Bankruptcy proceedings**

The following table shows the number of bankruptcies of the various types in each State, together with the disclosed assets and liabilities of the debtors, during 1970–71.

**BANKRUPTCY PROCEEDINGS: STATES AND TERRITORIES, 1970-71**

State or Territory		Sequestration orders and orders for administration of deceased debtors' estates	Compositions	Deeds of assignment	Deeds of arrangement	Total
N.S.W.(a)	Number	626	8	39	21	694
	Liabilities \$	5,901,988	132,070	1,113,697	1,178,038	8,325,793
	Assets \$	2,687,856	44,057	918,060	1,608,060	5,258,033
Vic.	Number	512	32	53	36	633
	Liabilities \$	3,782,780	375,607	1,595,371	950,840	6,704,598
	Assets \$	1,030,853	109,923	1,041,250	977,557	3,159,583
Qld	Number	264	7	21	8	300
	Liabilities \$	4,176,171	34,765	423,843	363,329	4,998,108
	Assets \$	1,704,678	14,768	196,586	497,677	2,413,709
S. Aust..	Number	611	2	6	7	626
	Liabilities \$	4,211,801	42,675	188,685	205,830	4,648,991
	Assets \$	2,579,476	29,492	158,729	105,096	2,872,793
W. Aust.	Number	292	14	25	59	390
	Liabilities \$	2,321,984	253,536	540,829	1,907,930	5,024,279
	Assets \$	636,720	70,046	471,092	1,941,916	3,119,774
Tas.	Number	122	1	8	8	139
	Liabilities \$	838,485	9,903	113,497	74,955	1,036,840
	Assets \$	226,535	17,921	161,173	68,289	473,918
N.T.	Number	1	..	..	..	1
	Liabilities \$	26,088	..	..	..	26,088
	Assets \$	2,201	..	..	..	2,201
Australia	Number	2,428	64	152	139	2,783
	Liabilities \$	21,259,297	848,556	3,975,922	4,680,922	30,764,697
	Assets \$	8,868,319	286,207	2,946,890	5,198,595	17,300,011

(a) Includes the Australian Capital Territory.

The next table shows Australian figures in respect of each of the various types of bankruptcy, for the years 1966–67 to 1970–71.



BANKRUPTCY PROCEEDINGS: AUSTRALIA, 1966-67 TO 1970-71

Year		Sequestration orders and orders for administration of deceased debtors' estates	Compositions	Deeds of assignment	Deeds of arrangement	Total
1966-67	Number . . .	2,284	127	18	108	2,537
	Liabilities \$'000	19,108	2,176	535	2,310	24,129
	Assets \$'000	7,685	1,293	308	1,542	10,829
1967-68	Number . . .	2,350	78	35	88	2,551
	Liabilities \$'000	15,222	1,828	1,229	3,330	21,609
	Assets \$'000	6,292	1,189	918	2,010	10,409
1968-69	Number . . .	2,302	52	103	93	2,550
	Liabilities \$'000	15,865	893	3,870	2,641	23,269
	Assets \$'000	7,588	447	2,699	1,674	12,408
1969-70	Number . . .	2,236	59	145	102	2,542
	Liabilities \$'000	18,243	1,006	3,810	2,903	25,962
	Assets \$'000	6,820	423	2,881	2,297	12,422
1970-71	Number . . .	2,428	64	152	139	2,783
	Liabilities \$'000	21,259	849	3,976	4,681	30,765
	Assets \$'000	8,868	286	2,947	5,199	17,300

The High Court of Australia

The High Court of Australia consists of a Chief Justice and six other Justices. Its principal seat is in Melbourne, but sittings are held in every State capital as occasion requires. The High Court has both original and appellate jurisdiction. Its original jurisdiction is usually exercised by a single Justice, appellate jurisdiction by at least three Justices. The following table sets out transactions in its original and appellate jurisdiction for 1970 and 1971.

TRANSACTIONS OF THE HIGH COURT OF AUSTRALIA, 1970 AND 1971

Original jurisdiction(a)	1970	1971	Appellate jurisdiction	1970	1971
Number of writs issued . . .	63	90	Number of appeals—		
Number of causes entered for trial . . . . .	38	27	Set down for hearing . . . . .	87	111
Judgments for plaintiffs . . . . .	11	5	Allowed . . . . .	27	47
Judgments for defendants . . . . .	3	3	Dismissed . . . . .	67	90
Otherwise disposed of . . . . .	16	14	Otherwise disposed of . . . . .	8	18
Amounts of judgments . . . . .	\$1,630,034	\$34,464			

(a) Some matters dealt with by the High Court neither originate as writs nor are entered as causes.

During 1970 and 1971, respectively, the High Court dealt also with the following: appeals from assessments under the Taxation Assessments Act, 153, 53; special cases stated for the opinion of the Full Court, 11, 3; applications for prohibition, etc., 5, 10. The fees collected amounted to \$15,183 in 1970 and \$15,992 in 1971.

Selected crime reported to police

The following tables show some details of certain categories of offences reported or becoming known to police. This series, which commenced in 1964, is derived from police records and is based, as far as possible, on definitions and procedural arrangements uniformly determined for all States. The following explanations are necessary in order to interpret the figures in this series.

*Offences reported or becoming known.* All incidents reported or becoming known to the police which are found to constitute offences within the scope of the crimes covered are included. Offences are shown as 'reported or becoming known' in the period during which it has been established that the incident constitutes a crime, not necessarily in the period when the incident occurred. However, the incident is included when the police are satisfied that a crime has been committed, even though it may be established in subsequent proceedings that no crime or a crime of a different nature was committed. As far as possible, the offences are recorded in respect of the State in which the incident occurred, regardless of which police force undertakes investigations or prosecutions, or where an arrest is made. In the case of homicide, assault, robbery, and rape, one offence is counted in respect of each victim, regardless of the number of offenders involved. In the case of breaking and entering, and fraud, etc., one offence is counted for each act or series of directly related acts occurring at the same time and place, and under the same circumstances. Each motor vehicle stolen is counted as constituting a separate offence.

*Offences cleared.* An offence of the type included in this series is counted as 'cleared' when an information (charge, arrest or summons to appear) has been laid against at least one person involved. However, an offence may also be counted as 'cleared' without an information being laid. This may occur when the offender has received an official caution or has died, has committed suicide, has been committed to a mental institution, or is in another jurisdiction from which extradition is not desired or available, or is serving a sentence; or if there are other obstacles to prosecution, such as diplomatic immunity or that the complainant refuses to prosecute. A clearance is always shown against the classification under which the offence was 'reported', regardless of the nature of the charge laid or changes in the description of an offence due to later information. The entries are made in respect of the year when the offence was 'cleared', whether or not the offence was 'reported' in that or an earlier year.

*Persons involved in crimes cleared.* This is the sum of the number of persons dealt with in each of the offences shown as 'cleared'. If more than one person is involved in the one offence, each person is counted. If the same person is involved in more than one offence cleared, he is counted separately for each offence. Persons involved are shown against the categories of offences to which an incident was originally allocated, regardless of the actual offences they are charged with. This basis of counting 'persons involved in offences cleared' was adopted to reveal trends in crime participation by persons in various age-groups. The figures in this series are not directly comparable with statistics of persons charged or convicted in court, or of cases brought before the courts; nor do these figures reveal the number of offenders in the community.

#### Offences included in the statistics

*Homicide.* Separate details are provided for murder, attempted murder (i.e. acts done with intent to murder) and manslaughter (unlawful killing other than murder), excluding manslaughter arising from motor traffic accidents.

*Serious assault.* These are assaults normally dealt with on indictment. Includes woundings, offences causing bodily harm, assaults with a weapon, etc., and attempts of this nature. Excludes sexual assault and robbery. *Uniform interpretation of this definition between States is especially difficult to effect.*

*Robbery.* Stealing anything, if at or immediately before or after the time of stealing, the offender uses or threatens to use violence to any person or property in order to obtain the thing stolen, or to prevent or overcome resistance to its being stolen. Includes attempts of this nature.

*Rape.* Includes attempted rape and assault with intent to rape. Excludes unlawful carnal knowledge (i.e. where consent is given, but the girl is below the legal age of consent) and indecent assault.

*Breaking and entering.* Breaking and entering a building (or entering a building and breaking out) and committing or intending to commit a crime. Includes burglaries. Separate details are shown according to the type of building involved, namely, *dwelling*s (including unoccupied dwellings, tents, caravans, etc., used as dwellings, and the residential parts of hotels, schools, etc.); *shops* (including kiosks, service stations, restaurants, bars, non-residential clubs, etc.); and *offices, factories and warehouses* (including parts of buildings, but excluding dwellings and shops used for such purposes). Includes attempts. From 1967 the figures exclude breakings involving property valued at \$100 or less.

*Motor vehicle thefts, illegal use, etc.* Includes all offences of illegal, unlawful or unauthorised use, use without consent, unlawfully assuming control, etc., no matter under which legislation these offences are prescribed. Excludes cases of 'interference', but includes attempts at illegal use. The number of stolen motor vehicles which are recovered is also shown.

*Fraud, forgery, false pretences.* Includes embezzlement, 'omit to account', misappropriation, fraudulent appropriation, conversion, larceny as bailee, falsification of accounts, company fraud, forgery, uttering, false pretences, passing of valueless cheques and offences by trustees. Includes attempts, but excludes imposition. As a general rule, offences are included only if there is an element of deception or trickery. Separate details are shown for *valueless cheque* offences (i.e. passing of valueless cheques, whether there is no account, insufficient funds or a false signature of the purported drawer of the cheque. However, this sub-group excludes cases where a genuine cheque is altered or the endorsement of the payee is forged. These cases are regarded as forgery and or uttering and included in 'other').

#### Offences reported or becoming known to police

The following table shows, for each State and Territory, the number of offences in each of the seven categories covered by this series which were reported or became known to police during the years 1967 to 1971. The table excludes offences reported to and investigated by the Commonwealth Police, which are shown on page 458.

SELECTED CRIME REPORTED OR BECOMING KNOWN TO POLICE  
NUMBER OF OFFENCES, STATES AND TERRITORIES, 1967 TO 1971

Category of crime	N.S.W.(a)	Vic	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Homicide—</b>									
1967 . . . . .	139	57	47	25	7	7	17	1	300
1968 . . . . .	140	52	51	18	14	10	12	3	300
1969 . . . . .	120	66	38	21	12	15	7	1	280
1970 . . . . .	125	107	36	34	15	10	9	3	339
1971 . . . . .	134	87	44	27	26	8	15	2	343
<b>Serious assault(b)—</b>									
1967 . . . . .	547	1,338	119	71	20	11	39	13	2,158
1968 . . . . .	611	1,600	128	52	60	19	15	23	2,508
1969 . . . . .	626	1,460	134	92	77	47	30	17	2,483
1970 . . . . .	799	2,014	177	87	95	32	46	32	3,282
1971 . . . . .	724	2,457	212	115	156	32	120	46	3,862
<b>Robbery—</b>									
1967 . . . . .	386	395	79	51	21	18	5	5	960
1968 . . . . .	544	480	88	79	48	23	6	12	1,280
1969 . . . . .	777	503	106	127	41	23	13	9	1,599
1970 . . . . .	867	744	124	140	69	33	11	11	1,999
1971 . . . . .	1,490	792	205	151	92	39	36	13	2,818
<b>Rape—</b>									
1967 . . . . .	72	138	32	43	5	17	2	2	311
1968 . . . . .	95	168	34	43	5	7	7	4	363
1969 . . . . .	126	144	35	32	6	7	7	7	364
1970 . . . . .	136	160	42	21	6	17	29	5	416
1971 . . . . .	204	191	74	44	21	23	17	4	578
<b>Breaking and entering (dwellings, shops, offices, etc.)(c)—</b>									
1967 . . . . .	7,806	7,656	1,417	1,165	552	340	40	96	19,072
1968 . . . . .	11,026	8,069	1,841	1,181	883	422	54	86	23,562
1969 . . . . .	11,923	8,215	2,035	1,299	1,368	586	66	105	25,597
1970 . . . . .	13,879	9,870	2,538	1,727	1,825	492	68	192	30,591
1971(d)	13,394	12,189	3,798	1,878	1,623	666	171	206	33,925
<b>Motor vehicle theft, etc.—</b>									
1967 . . . . .	12,558	8,348	1,544	1,701	1,707	603	119	211	26,791
1968 . . . . .	13,008	9,352	1,740	1,967	2,084	759	192	196	29,298
1969 . . . . .	16,082	9,343	2,295	1,741	1,895	658	228	250	32,492
1970 . . . . .	18,464	11,246	3,023	2,140	2,700	722	347	284	38,926
1971 . . . . .	20,756	12,688	4,090	2,746	3,645	1,012	482	376	45,795
<b>Fraud, forgery, etc.—</b>									
1967 . . . . .	5,438	3,367	2,872	2,185	1,256	292	143	270	15,823
1968 . . . . .	6,283	4,402	4,154	1,596	1,476	607	271	166	18,955
1969 . . . . .	5,897	4,554	4,056	2,927	1,924	660	187	210	20,415
1970 . . . . .	7,184	5,438	3,658	3,541	2,048	663	154	179	22,865
1971 . . . . .	9,881	5,777	4,324	3,098	1,818	634	217	217	25,966

(a) Figures for 1971 are not necessarily comparable with those for earlier years because of changes in reporting procedures.  
(b) See definition on page 455. (c) Excludes offences involving property valued at \$100 or less. (d) Excludes 8,175 attempted breaking and entering offences in New South Wales.

#### Crimes cleared and persons involved

The tables which follow show, for the various categories of offences, the numbers of offences reported, the numbers cleared, and the numbers of persons involved according to age and sex. Sub-divisions of the categories homicide, breaking and entering, and fraud, etc., are provided. See pages 454-6 for definitions used and the bases on which these statistics are prepared.



**HOMICIDE: CRIMES REPORTED OR BECOMING KNOWN, CRIMES CLEARED  
AND PERSONS INVOLVED, AUSTRALIA, 1969 TO 1971**

	<i>Murder</i>			<i>Attempted murder</i>			<i>Manslaughter</i>			<i>All homicide</i>		
	1969	1970	1971	1969	1970	1971	1969	1970	1971	1969	1970	1971
Numbers reported or becoming known .	157	172	185	90	145	119	33	22	39	280	339	343
Numbers cleared .	152	160	178	82	139	112	33	22	39	267	321	329
Persons involved in crimes cleared—												
Aged(a)—												
16 years and under .	4	15	9	6	7	3	2	1	1	12	23	13
17 and 18 years .	8	8	11	6	11	8	7	4	2	21	23	21
19 and 20 years .	8	14	9	6	17	11	5	1	5	19	32	25
21 years and over .	147	147	171	65	116	99	22	16	35	234	279	305
Total persons involved .	167	184	200	83	151	121	36	22	43	(b)286	(b)357	(b)364

(a) Age last birthday at time of clearance. (b) Includes 54 females in 1969, 51 in 1970, and 43 in 1971.

**SERIOUS ASSAULT, ROBBERY, RAPE: CRIMES REPORTED OR BECOMING KNOWN  
CRIMES CLEARED, AND PERSONS INVOLVED, AUSTRALIA, 1969 TO 1971**

	<i>Serious assault</i>			<i>Robbery</i>			<i>Rape</i>		
	1969	1970	1971	1969	1970	1971	1969	1970	1971
Numbers reported or becoming known .	2,483	3,282	3,862	1,599	1,999	2,818	364	416	578
Numbers cleared .	1,892	2,524	2,936	648	755	827	286	315	375
Persons involved in crimes cleared—									
Aged(a)—									
16 years and under .		176	268	182	200	251	30	40	39
17 and 18 years .		333	406	227	285	283	74	58	111
19 and 20 years .		326	449	210	238	217	83	73	100
21 years and over .		1,590	1,884	476	566	669	207	223	239
Total persons involved .	(b)2,425	(b)3,007	(b)3,669	(c)1,095	(c)1,289	(c)1,420	394	394	(d)489

(a) Age last birthday at time of clearance. (b) Includes 110 females in 1969, 119 in 1970 and 169 in 1971.  
(c) Includes 58 females in 1969, 44 in 1970, and 50 in 1971. (d) Includes 1 female in 1971.

**BREAKING AND ENTERING(a): CRIMES REPORTED OR BECOMING KNOWN, CRIMES  
CLEARED, AND PERSONS INVOLVED, AUSTRALIA, 1969 TO 1971**

	<i>Dwellings</i>			<i>Shops</i>			<i>Offices and warehouses</i>			<i>Total</i>		
	1969	1970	1971	1969	1970	1971	1969	1970	1971	1969	1970	1971
Numbers reported or becoming known .	12,258	15,110	17,707	7,215	7,552	9,243	6,124	7,929	6,975	25,597	30,591(b)	33,925
Numbers cleared .	1,983	2,306	2,119	1,862	1,885	1,854	1,142	1,253	836	4,987	5,444	4,809
Persons involved in crimes cleared—												
Ages(c)—												
16 years and under .	845	1,122	1,072	553	694	902	422	407	409	1,820	2,223	2,383
17 and 18 years .	492	600	682	594	590	634	306	331	251	1,392	1,521	1,567
19 and 20 years .	384	387	415	391	421	512	210	221	178	985	1,029	1,105
21 years and over .	1,013	1,180	1,112	1,357	1,175	1,182	764	890	588	3,134	3,245	2,882
Total persons involved .	2,734	3,289	3,281	2,895	2,880	3,230	1,702	1,849	1,426	(d)7,331	(d)8,018	(d)7,937

(a) Excludes offences involving property valued at \$100 or less. (b) Excludes 8,175 attempted breaking and entering offences in New South Wales. (c) Age last birthday at time of clearance. (d) Includes 210 females in 1969, 134 in 1970, and 274 in 1971.

**MOTOR VEHICLE THEFT, ETC., FRAUD, ETC.: CRIMES REPORTED OR BECOMING KNOWN, CRIMES CLEARED, AND PERSONS INVOLVED, AUSTRALIA, 1969 TO 1971**

	<i>Motor vehicles theft, etc.</i>			<i>Fraud, forgery, false pretences</i>								
				<i>Valueless cheques</i>			<i>Other</i>			<i>All frauds, etc.</i>		
	1969	1970	1971	1969	1970	1971	1969	1970	1971	1969	1970	1971
Numbers reported or becoming known	32,492	38,926	45,795	8,694	9,016	10,284	11,721	13,849	15,682	20,415	22,865	25,966
Numbers cleared	6,772	7,820	10,395	6,643	6,564	6,809	10,601	12,557	12,396	17,244	19,121	19,205
Persons involved in crimes cleared—												
Males aged(a)—												
16 years and under	4,571	5,662	7,754	177	189	177	404	529	346	581	718	523
17 and 18 years	2,753	3,331	4,168	209	241	294	298	332	661	507	573	955
19 and 20 years	1,295	1,300	1,692	409	332	441	369	513	663	778	845	1,104
21 years and over	1,840	2,035	2,907	5,352	4,887	5,189	7,512	7,507	8,529	12,864	12,394	13,718
Total males	10,459	12,328	16,521	6,147	5,649	6,101	8,583	8,881	10,199	14,730	14,530	16,300
Females aged(a)—												
16 years and under	86	118	269	43	35	55	132	132	120	175	167	175
17 and 18 years	69	42	71	17	102	54	178	351	313	195	453	367
19 and 20 years	25	39	49	85	86	106	315	255	285	400	341	391
21 years and over	33	34	52	748	1,226	846	1,729	3,274	2,113	2,477	4,500	2,959
Total females	213	233	441	893	1,449	1,061	2,354	4,012	2,831	3,247	5,461	3,892
Total persons involved	10,672	12,561	16,962	7,040	7,098	7,162	10,937	12,893	13,030	17,977	19,991	20,192

(a) Age last birthday at time of clearance.

The number of stolen motor vehicles recovered was: 1969, 29,371; 1970, 34,864; 1971, 41,332.

**Offences reported or becoming known to Commonwealth Police**

In addition to the offences shown in the preceding tables, the following statistics relate to those offences in the selected crime series which were reported to and investigated by the Commonwealth Police in 1971.

	<i>Breaking and Entering</i>	<i>Valueless cheques</i>	<i>Other Fraud</i>
Numbers reported or becoming known	8	2,004	6,148
Numbers cleared	6	419	2,268
Persons(a) involved in crimes cleared—			
Aged(b)—			
16 years and under	..	1	30(8)
17 and 18 years	..	13(1)	19(7)
19 and 20 years	..	14(2)	148(29)
21 years and over	6	406(124)	2,075(801)
Total persons involved	6	434(127)	2,272(845)

(a) Numbers of females are shown in brackets.

(b) Age last birthday at time of clearance.

**Drug offences**

Australia is a signatory to the Single Convention of Narcotic Drugs which has as its main aim the limitation of narcotic drugs to legitimate medical and research purposes.

As its name implies, the Single Convention covers only the so-called narcotic drugs. In recognition that there are other drugs of dependence, the member nations met during 1970 and 1971 and drew up a further Convention to impose controls on psychotropic substances such as hallucinogens, amphetamines, other central nervous system stimulants, barbiturates, tranquillisers and certain other sedatives.

**Legislative provisions**

Regulation 5 of the Customs (Prohibited Imports) Regulations made under Section 50 of the *Customs Act* 1901–1971 provides the legal controls for the importation of narcotic drugs and other drugs of dependence. Under this regulation all importers of these drugs must be licensed and must obtain permission in writing for each importation. Importers are also required to keep these drugs in a secure place and to keep such records as may be required concerning use or disposal.

The penalty on conviction for an offence relating to narcotic goods as defined in the *Customs Act* 1901-1971 is:

(a) In a Court of Summary Jurisdiction—

A fine not exceeding \$2,000 or imprisonment for a period not exceeding 2 years, or both.

(b) On indictment—

A fine not exceeding \$4,000 or imprisonment for a period not exceeding 10 years, or both.

The manufacture of narcotic drugs in Australia is controlled under the *Narcotic Drugs Act* 1967. The Act requires that a manufacturer shall be licensed and shall comply with strict conditions and directions relating to such manufacture and the handling of the drugs concerned. Failure to comply with these requirements constitutes an offence against the Act and the penalty upon conviction for such an offence is:

(a) In a Court of Summary Jurisdiction—

A fine not exceeding \$1,000 or imprisonment for a period not exceeding 2 years, or both.

(b) On indictment—

A fine not exceeding \$4,000 or imprisonment for a period not exceeding 10 years, or both.

State and Territory legislation relating to the regulation, control and prohibition of the sale, use, possession and administering (including smoking) of poisons, restricted substances, drugs of addiction, dangerous drugs and deleterious substances, is listed below.

New South Wales	Poisons Act, 1966-1967; Summary Offences Act, 1970
Victoria	<i>Poisons Act</i> 1962
Queensland	<i>'The Health Acts 1937 to 1967'</i>
South Australia	Narcotic and Psychotropic Drugs Act, 1970 (formerly Dangerous Drugs Act, 1934-1955); Food and Health Act, 1908-1962; Police Offences Act, 1953-1961
Western Australia	<i>Police Act, 1892-1967; Poisons Act</i> 1964
Tasmania	<i>Dangerous Drugs Act</i> 1959; <i>Alcohol and Drug Dependency Act</i> 1968; <i>Health Services Act</i> 1960
Northern Territory	<i>Dangerous Drugs Ordinance</i> 1928-1969; <i>Poison Ordinance</i>
Australian Capital Territory	<i>Poisons and Dangerous Drugs Ordinance</i> 1967

In some States this legislation also provides for the offence of 'trafficking' (where there is possession of a minimum specified quantity of a prescribed substance, prohibited drug, or drug of addiction, such possession being *prima facie* for the offence), and for the offence of being the owner, lessee, or concerned in the management of any premises used for the purposes of drug abuse such as the smoking of opium or indian hemp. Offences of habitually consorting, etc., with reputed drug offenders are also covered under State legislation.

During 1971 some States introduced legislation requiring that stocks of dangerous drugs in pharmacies be stored in heavy metal safes.

All State Governments have agreed to a uniform code of penalties based on those applicable in Commonwealth legislation. Some State Governments have already taken the legislative action to implement this decision.

### Law enforcement

Law enforcement in respect of drugs is handled by State police forces, the Commonwealth Police Force, and the Department of Customs and Excise. In 1969 a National Standing Control Committee on Drugs of Dependence was established to consider further action by the Commonwealth and States to combat all aspects of the drug problem in Australia and to make recommendations on legislative and administrative action. The Committee is chaired by the Comptroller-General of Customs and its members comprise senior officers of Commonwealth and State police and health authorities.

The National Standing Control Committee on Drugs of Dependence recommended that the Central Crime Intelligence Bureau of the Commonwealth Police serve as the national agency for the systematic collection, evaluation and dissemination of information concerning the illicit drug traffic in Australia. During 1971, the second complete year for which the Central Crime Intelligence Bureau compiled statistics, 3,869 drug offences, for which 1,890 males and 408 females were prosecuted, were reported to the Bureau. Details of the offences and the drugs involved are given in the following table.



## DRUG OFFENCES REPORTED TO THE CENTRAL CRIME INTELLIGENCE BUREAU: 1971

(Source: Commonwealth Police(a))

Type of drug	Type of offence(b)			Total	per cent
	Possession (including importation)	Use	Traffic		
Amphetamines—					
Amphetamine . . . . .	32	24	3	59	7.1
Dexamphetamine . . . . .	28	6	2	36	
Methylamphetamine . . . . .	37	9	7	53	
Other—Not specified . . . . .	59	11	8	78	
Total amphetamines . . . . .	156	50	20	226	7.1
Barbiturates—					
Amylobarbitone (amytal) . . . . .	3	8	6	17	2.6
Pentobarbitone (nembutal) . . . . .	25	21	10	56	
Other—Not specified . . . . .	6	3	1	10	
Total barbiturates . . . . .	34	32	17	83	2.6
Cannabis—					
Indian hemp, hashish, marihuana, plants (cannabis), seeds (cannabis) . . . . .	859	559	125	1,543	48.6
Hallucinogenic—					
L.S.D. . . . .	96	130	87	313	10.4
Psilocybin . . . . .	16	1	2	19	
Total hallucinogenic . . . . .	112	131	89	332	10.4
Narcotics—					
Heroin . . . . .	24	26	7	57	18.5
Morphine . . . . .	102	132	15	249	
Opium . . . . .	19	9	..	28	
Pethidine . . . . .	23	38	6	67	
Other—Not specified . . . . .	71	93	23	187	
Total narcotics . . . . .	239	298	51	588	18.5
Other—Not specified . . . . .	310	73	24	407	12.8
Total . . . . .	1,710	1,143	326	3,179	
Per cent . . . . .	53.8	36.0	10.2	..	100.0

(a) From information provided by State police forces and the Commonwealth Department of Customs and Excise.  
 (b) These offences comprised 82.1 per cent of the total of 3,869 offences reported for 1971.

In 1969 the Commonwealth Bureau of Narcotics was created within the Department of Customs and Excise, as part of the Government's campaign to combat the increasing incidence of illicit trafficking of drugs in Australia. The Bureau operates on a national basis and is made up of three sections:

*Licit Control Section*—responsible for the control of legal importation and exportation of all drugs of dependence as well as controlling the manufacture of narcotic drugs in Australia. The section is also responsible for ensuring that Australia's obligations, as a signatory to the various international conventions on drugs, are complied with.

*Overseas Liaison*—responsible for maintaining an effective system for the exchange of information with overseas law enforcement agencies concerned with the suppression of illicit trafficking in drugs.

*Law Enforcement*—responsible for the prevention of, and investigations into, illegal importation, exportation, and major trafficking of drugs. Its activities are concentrated in co-ordinated operations against importers and major distributors.

The following table shows the types of drugs and amounts seized by the Department of Customs and Excise in the years 1967–71.

## DRUG SEIZURES BY THE DEPARTMENT OF CUSTOMS AND EXCISE: 1967 TO 1971

Type of drug	Unit	1967	1968	1969	1970	1971
Amphetamines(a)	gram	..	..	..	11,379	18
	tablet	..	..	688	..	1,421
Barbiturates(a)	gram	..	..	..	..	22
	tablet	..	..	..	2,800	287
Cannabis	gram	1,376	5,654	47,809	98,078	178,654
Cocaine	gram	..	..	..	..	4
	tablet	..	..	..	120	9
L.S.D.	dosage unit	237	..	368	17,611	21,676
Narcotics—						
Opium	gram	21,530	3,660	889	9,950	6,094
Heroin	gram	2,572	1,977	196	1,405	2,468
Morphine	gram	..	1,387	..	29	31
	ampoule	..	..	8	18	6
	tablet	..	..	..	151	2
Pethidine	tablet	..	..	..	43	6

(a) Not a prohibited import until 1969.

The number of offenders charged with drug offences by the Department of Customs and Excise, and the sentences imposed in the years 1967 to 1971 are given in the following table. Particulars of all drug offences in 1971 reported to the Central Crime Intelligence Bureau are shown in the table on page 460.

## PROSECUTIONS AND CONVICTIONS UNDER THE CUSTOMS ACT AND THE NARCOTIC DRUGS ACT FOR OFFENCES INVOLVING DRUGS OF DEPENDENCE 1967 TO 1971

(Source: Department of Customs and Excise)

Offence and year	Number of offenders	Number of individual charges	Convictions on individual charges	Fines imposed		Gaol sentences		Number of bonds granted (a)	Number of charges not proceeded with or dismissed	Number of charges pending
				Number	Amount	Number	Months			
Unlawful possession—					\$					
1967	50	54	48	29	2,940	17	228½	2	1	5
1968	51	52	46	41	8,820	4	22	1	3	3
1969	61	63	60	50	9,490	5	57	5	1	2
1970	79	82	68	50	18,415	19	220	4	5	9
1971	53	56	31	13	2,870	14	266	4	12	13
Unlawful import—										
1967	11	11	7	4	325	3	8	..	1	3
1968	21	25	15	13	1,615	2	42	..	3	7
1969	32	34	27	20	5,300	7	84	1	..	7
1970	55	62	58	36	15,285	16	238	9	..	4
1971	74	78	60	41	11,005	16	188	3	2	16
Other offences—										
1967	1	1	..	..	..	..	..	..	1	..
1968	1	1	1	1	500	..	..	..	..	..
1969	5	5	4	3	500	1	6	..	1	..
1970	12	13	12	11	700	..	..	..	1	..
1971	15	15	10	6	3,950	4	88	..	..	5

(a) Bonds include suspended gaol sentences and/or other recognisances to be of good behaviour for a specified period.

NOTE. Where dual penalties such as a fine and a bond were imposed both are included.

## Senate Select Committee

On 25 November 1969, by resolution of the Senate, a Select Committee into Drug Trafficking and Drug Abuse was established. The report of the findings of the Senate Select Committee was tabled in May 1971.

## Police

The primary duties of the police are to prevent crime, to detect and detain offenders, to protect life and property, to enforce the law, and to maintain peace and good order. In addition, they perform many duties in the service of the State, e.g. they act as clerks of petty sessions in small centres, as crown land bailiffs, foresters, mining wardens, and inspectors under the fisheries and various other

Acts. In metropolitan and large country areas they also regulate the street traffic. With the exception of the Commonwealth Police Force and the police in the Northern Territory and the Australian Capital Territory, the police forces of Australia are under the control of the State Governments, but their members perform certain functions for the Commonwealth Governments, such as acting as aliens registration officers and concurrently with Commonwealth Police and other Commonwealth Officers, policing various Commonwealth Acts and Regulations.

Women police perform special duties at places where young women and girls are subject to moral danger, control traffic at school crossings and lecture school children on road safety. They also assist male police as required in the performance of normal police duties.

The strength of the police force and the duties and ranks of the personnel involved in each State and Territory for 1971 are shown in the following table. Comparability between States is affected by differences in the classification of ranks and duties, and known differences between States are mentioned in footnotes.

Also included in the table are statistics of ancillary and civilian staff employed by police departments. Differences between States in the use of such staff are considerable. These differences arise, on the one hand, from differences in the extent to which police make use of such staff for police functions and, on the other hand, in the extent to which such staff are required to undertake additional functions (such as parking control) which are allocated to the police in varying degrees between States. There is also some overlap between duties of ancillary and civilian staff as defined in the footnotes to the table.

#### POLICE FORCES AND ASSISTANT STAFF: STATES AND TERRITORIES, 30 JUNE 1971

<i>Duty and rank(a)</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>
<b>POLICE FORCES</b>								
Criminal investigations, plain clothes police, scientific duties—								
Executive officers . . .	3	2	1	1	1	1	..	..
Inspectors . . .	15	18	9	3	5	5	1	1
Sergeants . . .	344	64	147	41	52	17	11	8
Constables(b) . . .	826	602	(c)296	241	93	90	29	19
Total, criminal investigations, etc. . .	1,188	686	(c)453	286	151	113	41	28
Traffic duties—								
Executive officers . . .	2	1	1	1	3	1	..	..
Inspectors . . .	8	10	4	4	4	2	..	1
Sergeants . . .	160	22	31	20	42	7	3	10
Constables(b) . . .	886	443	(c)263	197	186	77	14	61
Total, traffic duties . . .	1,056	476	(c)299	222	235	87	17	72
Other special and general duties—								
Executive officers . . .	23	22	6	9	13	5	..	..
Inspectors . . .	122	99	(d)67	40	19	31	3	10
Sergeants . . .	1,328	222	673	173	229	45	32	47
Constables(b) . . .	3,473	3,152	(e)1,518	1,210	883	441	157	181
Total, other special, etc. . .	4,946	3,495	(c)2,264	1,432	(e)1,144	522	(f)192	(f)238
Not allocated—								
Executive officers whose duties extend beyond one branch . . .	5	3	(g)5	2	4	..	(h)3	2
Inspectors . . .	..	1	..	..	..	..	..	..
Police women . . .	99	109	30	37	34	15	6	7
Trainees and cadets . . .	176	175	146	381	48	59	..	..
Total, not allocated . . .	280	288	181	420	86	74	9	9
Total police force—								
Executive officers . . .	33	(h)28	(g)13	13	(h)21	7	(h)3	2
Inspectors . . .	145	128	80	47	28	38	4	12
Sergeants . . .	1,832	308	851	234	323	69	46	65
Constables(b) . . .	5,185	4,197	(c)2,077	1,648	1,162	608	200	261
Police women . . .	99	109	30	37	34	15	6	7
Trainees and cadets . . .	176	175	146	381	48	59	..	..
Total police force . . .	7,470	4,945	3,197	2,360	1,616	796	259	347

#### ANCILLARY AND CIVILIAN STAFF

<b>Employed by Police Department—</b>								
Ancillary staff(i)—								
Full-time . . .	187	104	25	(j)178	..	..	34	..
Part-time . . .	..	3	..	2	118	..	..	..
Civilian staff(k)—								
Full-time . . .	(l)1,087	787	383	87	(m)476	106	27	53
Part-time . . .	..	58	30	8	181	..	..	..

For footnotes see next page.



POLICE FORCES AND ASSISTANT STAFF: STATES AND TERRITORIES, 30 JUNE 1971—  
*continued*

<i>Duty and rank(a)</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>
<b>TOTAL STAFF</b>								
Grand total—								
Full-time . . . .	8,744	5,836	3,605	2,625	2,092	902	320	400
Part-time . . . .	..	61	30	10	299	..	..	..

(a) Where more than one duty is involved, officers have been allocated to the category of duties in which the greater part of their time is spent. The allocation of executive officers and inspectors to categories of duties is necessarily somewhat arbitrary and varies from State to State. (b) Includes probationary constables. (c) Excludes probationary constables; included with trainees and cadets. (d) Includes sub-inspectors. (e) Includes officers engaged on motor vehicle examination and testing and licensing drivers. (f) Does not include transport and maintenance; each section undertakes its own transport, and maintenance is done on contract and/or by the government transport pool. (g) Includes 1 chief superintendent. (h) Includes 1 chief inspector. (i) Parking police, native trackers, wardresses, etc.; special constables in New South Wales and Tasmania; police reservists in Victoria. (j) Includes clerical workers in the Women Police Auxiliaries. (k) Clerks, typists, artisans, cleaners. (l) Does not include cleaning which is done by the Cleaning Services Branch of the Government Stores Department. (m) Includes 58 cadets whose appointment is not subject to the Police Act.

Ancillary and civilian staff are excluded from the following table.

**POLICE FORCES: STATES AND TERRITORIES, 1967 TO 1971**

<i>30 June—</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1967 . . . .	6,765	4,711	3,056	2,059	1,375	645	151	215	18,977
1968 . . . .	7,111	4,825	3,083	2,214	1,421	632	172	228	19,686
1969 . . . .	7,259	4,743	3,179	2,255	1,490	670	195	288	20,079
1970 . . . .	7,324	4,739	3,221	2,282	1,529	701	235	290	20,321
1971 . . . .	7,470	4,945	3,197	2,360	1,616	796	259	347	20,990

**Commonwealth Police Force**

The Commonwealth Police Force commenced operations on 21 April 1960, and is the principal agency for the enforcement of the laws passed by the Commonwealth Parliament. It is also responsible for the protection of Commonwealth property and interests at various buildings and establishments under the control of the Commonwealth. This force co-ordinates the work of other Commonwealth investigation and law enforcement agencies and acts on behalf of the United Nations Organisation for the suppressing of traffic in women and the suppression of obscene literature.

Under the control of the force is the Australian Police College at Manly, New South Wales, which provides training for officers of various police forces and other agencies in Australia and New Zealand. The force has its Head Office in Canberra and District Offices in each capital city. The strength of the force at 30 June 1971 was 974 policemen and 4 policewomen. At that date there were, in addition, 103 civilian employees.

**Prisons**

**Prisons and prison accommodation**

**PRISONS AND PRISON ACCOMMODATION: STATES AND NORTHERN  
TERRITORY, 30 JUNE 1970**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Aust.</i>
Prisons . . . .	21	13	8	16	17	1	2	78
Accommodation . .	3,783	2,626	1,303	1,356	1,548	417	218	11,251

There is no gaol in the Australian Capital Territory, but there are two lock-ups attached to police stations at Canberra and another lock-up at Jervis Bay where offenders are held for short periods. Prisoners remanded or sentenced by a court in the Australian Capital Territory for more than five days are usually held in New South Wales prisons.

## Convicted prisoners

## CONVICTED PRISONERS: STATES AND TERRITORIES, 1966 TO 1970

									Australia
30 June—	N.S.W. (a)	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Number	Per 10,000 of popu- lation
1966 . . .	3,140	1,872	995	818	863	259	107	8,054	6.9
1967 . . .	3,334	1,994	1,021	866	1,137	275	112	8,739	7.4
1968 . . .	3,292	2,103	958	926	1,150	281	120	8,830	7.3
1969 . . .	3,327	2,199	1,065	884	1,214	331	177	9,197	7.5
1970 . . .	3,429	2,178	1,104	836	1,174	327	198	9,246	7.4

(a) Includes Australian Capital Territory prisoners held in New South Wales prisons.

## Expenditure on law, order and public safety

## Expenditure on law, order and public safety

The following table shows the identifiable expenditure on goods and services of Commonwealth and State public authorities whose activities are primarily directed towards serving the purposes of law, order and public safety. Because of differing legislative and administrative arrangements and differing accounting practices in the various States, the activities covered by the figures are not the same in each State; and the activities covered by the Commonwealth figures differ from those of the States because of the Commonwealth's different responsibilities in this field. The Commonwealth and State figures are therefore not strictly comparable; but they have been compiled by uniform methods, and each series is comparable from year to year.

ALL PUBLIC AUTHORITIES: EXPENDITURE ON LAW, ORDER AND PUBLIC SAFETY  
1966-67 TO 1970-71  
(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71
Net current expenditure on goods and services—					
Commonwealth Authorities . . .	11.2	12.5	13.9	16.5	20.1
State Authorities—					
New South Wales . . . . .	59.6	64.9	71.6	81.2	93.4
Victoria . . . . .	36.9	40.0	43.7	48.3	53.5
Queensland . . . . .	22.6	24.7	27.5	31.2	38.5
South Australia . . . . .	12.2	13.3	14.4	15.6	18.2
Western Australia . . . . .	11.9	12.8	15.4	18.7	22.8
Tasmania . . . . .	4.9	5.9	6.5	7.2	8.4
Total States . . . . .	148.0	161.5	179.2	202.1	234.8
Total Current . . . . .	159.2	174.0	193.1	218.7	254.9
Gross fixed capital expenditure—					
Commonwealth authorities . . . .	0.6	1.5	1.6	1.5	2.1
State authorities—					
New South Wales . . . . .	4.4	5.3	7.2	9.3	10.6
Victoria . . . . .	4.4	4.7	7.0	4.4	3.9
Queensland . . . . .	2.9	3.2	3.9	4.6	4.4
South Australia . . . . .	1.3	0.8	0.8	1.1	1.7
Western Australia . . . . .	0.8	0.9	1.7	1.3	1.8
Tasmania . . . . .	0.8	0.8	1.2	1.2	1.8
Total States . . . . .	14.6	15.7	21.8	22.0	24.2
Total Capital . . . . .	15.2	17.1	23.3	23.4	26.3
Total expenditure . . . . .	174.4	191.1	216.4	242.1	281.2

## Fire brigades

### New South Wales

A Board of Fire Commissioners, consisting of six members, two appointed by the State Government (President and Deputy President) and one each representing insurance companies, local government authorities, volunteer firemen, and permanent firemen, operates under the Fire Brigades Act, 1909-1970, and 167 fire districts had been constituted at the end of 1970. The cost of maintenance of fire brigades is borne in proportions of local councils and the Government each one-eighth, and the insurance companies three-quarters.

At 31 December 1971 the actual strength of the Fire Brigade throughout the fire districts of New South Wales was 493 officers and 1,395 permanent and 2,739 volunteer firemen. Corresponding figures for the Sydney Fire District were 398, 1,201 and 238. The revenue for the year 1970 was \$12,241,000, as follows: from the Government, \$1,511,000; municipalities and shires, \$1,511,000; fire insurance companies and firms, \$9,054,000; and from other sources, \$165,000. The disbursements for the year were \$13,277,000. The Board of Fire Commissioners provides the fire protection services for Canberra, in the Australian Capital Territory, and the cost of these services is reimbursed by the Commonwealth Government.

Under the Bush Fires Act, 1949-1970 a Bush Fire Fighting Fund exists from which finance is provided for the prevention and fighting of bush fires. Contributions to the Fund by the Government, councils and insurance companies are in the proportion of one-quarter, one-quarter and one-half, respectively. At 30 June 1971 Volunteer Brigades equipped by means of this fund numbered 2,420 with an active membership of about 60,000 persons. The expenditure from the Fund for equipment, up to 30 June 1972, amounted to \$11,016,000.

### Victoria

In Victoria, fire brigades are controlled by the Metropolitan Fire Brigades Board consisting of eight members, including an employees' representative, and the Country Fire Authority consisting of eleven members.

*Metropolitan Fire Brigades Board.* The Metropolitan Fire Brigades Board receives contributions from the municipalities and the insurance companies in the proportion of one-third and two-thirds respectively. At 30 June 1971 the Board had under its control 46 stations, 1,242 permanent staff, and 271 special service and clerical, etc. staff. The total receipts for 1970-71 were \$10,371,377, comprising contributions \$9,171,388, receipts for services \$779,192, and interest and sundries \$420,797. The expenditure was \$10,094,515.

*Country Fire Authority.* This authority is responsible for the prevention and suppression of fires in the 'country area of Victoria', which embraces the whole of the State outside the Metropolitan Fire District, excluding State forests, National Parks and certain Crown lands. The country area has been divided into twenty-five fire control regions, three of which (Ballarat, Bendigo and Geelong) are wholly urban and the remainder mixed urban and rural. The Country Fire Authority receives contributions in the proportion of two-thirds from insurance companies and one-third from the Treasury. At 30 June 1971 the Country Fire Authority Act applied to 180 insurance companies and 212 urban and 1,052 rural fire brigades. Permanent staff of the Authority totalled 311 (including administrative), while the effective strength of volunteer personnel was 112,730. Income for the year 1970-71 amounted to \$4,111,392. Total expenditure other than loan redemption and capital expenditure amounted to \$3,914,971.

### Queensland

There are two controlling bodies responsible for fire fighting services throughout Queensland. The State Fire Services Council controls brigades set up under 'The Fire Brigades Acts, 1964 to 1966,' and the Rural Fires Board under provisions of 'The Rural Fires Act, 1946 to 1968' administers bush fire brigades. In addition a local authority may establish a fire fighting brigade of its own as do some major establishments such as the State Forestry Department and private companies whose activities involve fire hazards.

Fire districts are constituted under 'The Fire Brigades Acts, 1964 to 1966'. For each district, there must be a Fire Brigades Board consisting of seven members, and the cost of maintenance of each brigade is proportioned as follows: Treasury one-eighth, insurance companies three-quarters, and local authorities one-eighth. The insurance companies' contribution is paid to the State Government and thence to fire brigades.

At 30 June, 1971 there were 81 fire brigade boards. The number of stations was 186 and full-time staff numbered 1,195, comprising 64 administrative, 306 officers and 825 firemen. Volunteers numbered 46. Part-time staff numbered 1,339 comprising 74 administrative, 160 officers and 1,105



firemen. The total revenue for the year 1970-71 was \$7,610,232, received mainly from the following sources: Government \$911,500, local authorities \$911,500, insurance companies \$5,468,998. Loan receipts (Government and other) were \$758,928. The total expenditure for the year was \$7,443,031, the chief items being salaries and wages \$5,478,257, and interest and redemption of loans \$659,712.

The Rural Fires Board consists of a chairman and nine members. All, except the one representing the United Graziers Association, are appointed by the Governor-in-Council from Government Departments and the Minister of Lands has power to add up to three additional members from the community as a whole. For administrative purposes the State is divided into Rural Fire Districts under the control of a Chief Fire Warden and in these districts fire wardens are appointed to assigned areas. These officers co-ordinate and control the bush fire brigades on a voluntary basis. At 30 June 1971 there were 180 rural fire districts with 1,656 voluntary fire wardens and bush fire brigades numbered 1,041. Expenditure by the State Government during 1970-71 amounted to \$91,233.

#### South Australia

The Fire Brigades Act, 1936-1958 provides for a board of five members, that the expenses and maintenance of brigades are defrayed in the proportion of two-ninths by the Treasury, five-ninths by insurance companies and two-ninths by the municipalities concerned, and that when the Treasury proportion exceeds its statutory contribution of approximately \$31,000, the excess is borne five-sevenths by insurance companies and two-sevenths by the municipalities. At 30 June 1971 there were altogether 37 fire brigade stations, of which 16 were metropolitan and 21 country.

The strength of the permanent staff at 30 June 1971 was 554, comprising 388 officers and men, 109 country auxiliary firemen and 57 other employees (including maintenance workers). The total revenue for the year 1970-71 was \$2,177,060, including contributions of \$1,901,772 made up as follows: insurance companies \$1,144,374, Treasury \$299,648 and municipalities \$457,750. The Treasury contribution includes a special grant of \$266,972.

#### Western Australia

By the provisions of the *Fire Brigades Act, 1942-1966* certain local government areas are constituted fire districts under the control of the Western Australian Fire Brigades Board. There were 64 fire districts at 30 June 1971. The contribution to the Board is made in the proportion of 16 per cent from the Government, 20 per cent from local government authorities, and 64 per cent from insurance companies. The number of local government authorities and insurance companies who contributed numbered 77 and 165 respectively. Fifteen permanent and two volunteer brigades operate in the metropolitan fire district centred on the City of Perth. Permanent brigade personnel serve with volunteer brigade personnel in five large country centres and volunteer brigades provide town fire protection at some fifty other centres. At 30 June 1971 the Board had 557 employees and there were 1,460 volunteer brigade officers and firemen. The revenue for the year ended 30 June 1971 was \$3,636,986 and the expenditure \$3,750,772.

Under the *Bush Fires Act, 1954-1970* a Bush Fires Board, consisting of thirteen members, six of whom are nominated by the Country Shire Councils' Association, was set up to advise the Minister for Lands on bush fire control and to administer the Bush Fires Act. The Act also provides for the registration of bush fire control officers, who numbered 2,396 at 30 June 1971, and the establishment of bush fire brigades, 944 at 30 June 1971. Many individual brigades are large organisations with numerous self-contained sections.

#### Tasmania

The *Fire Brigades Act 1945* provided for the creation of the Fire Brigades Commission of Tasmania to co-ordinate the activities of existing fire brigade boards, while leaving the responsibility for individual control and management with the boards. The Commission comprises the following: two persons nominated by the Minister; one person representing the City or Municipal Councils; one person nominated by the Chairman of the Rural Fires Board; and three persons representing the insurance companies. Contributions towards the cost of operations are on the basis of 22.5 per cent each from the Treasury and the municipalities and 55 per cent from the insurance companies concerned. The cost for the year 1970-71 amounted to \$1,262,167. There were, at 30 June 1971, 23 boards controlling 40 stations, and their aggregate staffs numbered 683 (officers and firemen), comprising 224 permanent firemen, 419 part-time firemen and 40 volunteers; the volunteers all operate under the Hobart Board in the forested and mountainous Fern Tree area.

Following the fire disaster of February 1967, amendments were made to the *Rural Fires Act 1950*. The 1967 Act brought the separate urban and rural fire services and the State Civil Defence and Emergency Services together under the Chief Secretary. The newly-constituted Rural Fires Board, under a chairman appointed by the Governor, consists of 16 members. The Board has a paid staff of 15, headed by the State Fire Control Officer and includes five regional fire officers and an assistant

regional officer. At 30 June 1971 there were 273 rural fire brigades composed of 6,600 registered volunteers. The Board's budget in 1970-71 was \$371,937. Half the administrative expenditure is met by insurance companies insuring rural properties, and half by the Government. Special fire area expenditure is borne by the Government, with remaining expenditure being shared proportionately between the Government and municipalities.

## Patents, trade marks and designs

### Patents

Patents for inventions are granted under the *Patents Act* 1952-1969, which applies to the Commonwealth of Australia and the Territories of Norfolk Island and Papua New Guinea. The Act is administered by a Commissioner of Patents. The amending Act of 1969 came into operation on 1 January 1970. Regulations under the Act provide variable fees for lodgment of applications depending on size of specifications and number of claims. The basic fee for lodging an application and complete specification is \$20.00. Examination no longer automatically follows lodgment of applications. The Commissioner may now direct an applicant to request examination in which case the examination fee is \$60.00, or the applicant may request it of his own accord, in which case the fee is \$80.00. If examination is not requested within five years after lodgment, the application lapses.

Annual taxes are payable commencing with a fee of \$8.00 after the expiration of two years from the date of lodgment of the complete specification and rising to \$50.00 after the expiration of 15 years from that date.

#### PATENTS: AUSTRALIA, 1967 TO 1971

	1967	1968	1969	1970	1971
Applications . . . . .	15,733	16,712	17,446	16,443	16,407
Applications accompanied by provisional specifications . . . . .	3,708	3,899	3,637	3,628	3,933
Letters patent sealed . . . . .	6,356	5,537	7,127	6,130	10,641

### Trade marks and designs

Under the *Trade Marks Act* 1955-1966 the Commissioner of Patents is also Registrar of Trade Marks. Provision is made for the registration of users of trade marks and for their assignment with or without the goodwill of the business concerned. A new classification of goods was adopted in 1958, and trade marks registered under repealed Acts are reclassified on renewal. Under the *Designs Act* 1906-1968 the Commissioner of Patents is also Registrar of Designs.

#### TRADE MARKS AND DESIGNS: AUSTRALIA, 1967 TO 1971

	1967	1968	1969	1970	1971
Trade marks—					
Received . . . . .	7,537	8,301	9,246	9,117	8,866
Registered . . . . .	5,333	4,612	4,809	5,823	5,710
Designs—					
Received . . . . .	1,627	1,769	1,975	2,007	1,977
Registered . . . . .	1,833	1,614	1,440	1,604	1,578

## Copyright

Copyright is regulated by the Commonwealth *Copyright Act* 1968, which came into force on 1 May 1969. On that date Australia ratified its adherence to the Brussels revision of the Berne Copyright Convention and to the Universal Copyright Convention, whereby citizens of member countries are accorded protection by complying with the convention formality requiring proprietors to place on their works the symbol © together with their name and the year of first publication, in such a manner and location as to give reasonable notice of their claim of copyright in the works so identified. The new legislation contains no provision for the registration of copyright, and the Copyright Office ceased to exist on 1 May 1969. Copyright is now administered by the Attorney-General's Department.





## CHAPTER 16

### NATIONAL ACCOUNTS

National accounting aims at providing a systematic summary of the transactions taking place in the economy, especially of those that relate to the production and use of goods and services, and to transfers of income or capital between sectors of the economy.

Estimates of national income and expenditure have been compiled by the Bureau since 1944–45 and have been published annually as papers entitled *National Income and Expenditure* accompanying the Commonwealth Budgets. Detailed annual estimates of national income and expenditure on a revised basis were published in *Australian National Accounts, National Income and Expenditure, 1970–71* (7.1). Preliminary estimates (less detailed) for 1970–71 were published earlier in a Budget Paper. Quarterly estimates are published in *Quarterly Estimates of National Income and Expenditure* (7.5). A supplement to the December quarter 1971 issue of *Quarterly Estimates of National Income and Expenditure* (7.10) included the first presentation of quarterly series of gross national product and related aggregates at constant prices seasonally adjusted.

More recently, the Bureau has been engaged in the compilation of input-output tables for the Australian economy. Preliminary tables for the year 1962–63 were published in *Australian National Accounts, Input-Output Tables 1962–63* (Preliminary) (7.9) issued in February 1971. Additional tables and a final report are in the course of preparation.

The figures shown on pages 473–9 are as published in *Australian National Accounts, National Income and Expenditure, 1970–71*.

### NATIONAL INCOME AND EXPENDITURE

#### Description of National Income and Expenditure Accounts

A brief description of the conceptual basis of national accounts is given in this section, but for a more detailed treatment of the concepts and structure of the Australian National Accounts reference should be made to *Australian National Accounts, National Income and Expenditure, 1970–71*.

#### Definition and relationship of the concepts of product, income and expenditure

The main concepts of product, income and expenditure in the Australian National Accounts are defined and expressed in equivalents as follows.

*Gross national expenditure* is the total expenditure within a given period on final goods and services (i.e. excluding goods and services used up in the process of production) bought for use in the Australian economy. It is equivalent to gross national product plus imports of goods and services less exports of goods and services.

*National turnover of goods and services* is the total flow within a given period of final goods and services (i.e. excluding any intermediate usage of goods and services entering the Australian economy from production and imports). This value is equivalent to gross national product plus imports of goods and services or, alternatively, to gross national expenditure plus exports of goods and services.

*Gross national product* is the total market value of goods and services produced in Australia within a given period after deduction of the cost of intermediate usage of goods and services but before deducting allowances for the consumption of capital equipment. Thus gross national product, as here defined, is 'at market prices'. It is equivalent to gross national expenditure plus exports of goods and services less imports of goods and services. *Gross farm product (at market prices)* is that part of gross national product which derives from production in rural industries excluding forestry. *Gross non-farm product (at market prices)* arises from production in all other industries.

*Gross national product at factor cost* is that part of the cost of producing the gross national product which consists of gross payments to factors of production (labour, land, capital, and enterprise). It represents the value added by these factors in the process of production and is equivalent to gross national product less indirect taxes plus subsidies.

*Net national product* is the part of the value added within a given period by factors of production (labour, land, capital, and enterprise) which accrues as income to their suppliers after allowing for the depreciation of capital equipment. It is equivalent to gross national product at factor cost less depreciation allowances.

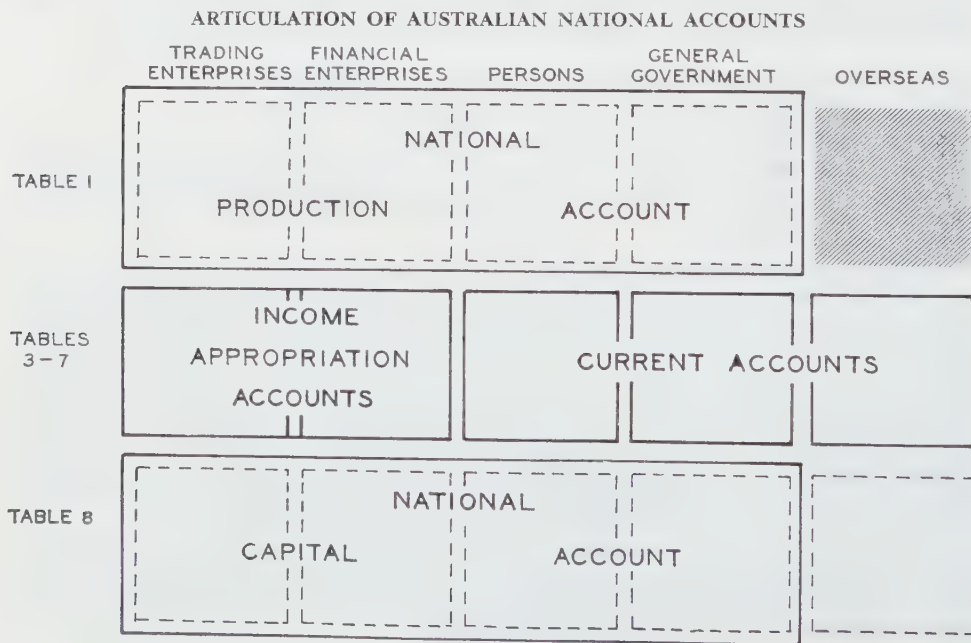
*National income* is the net income accruing within a given period to Australian residents from their services in supplying factors of production (labour, land, capital, and enterprise) in Australia or overseas. It is equivalent to net national product plus income receivable from overseas less income payable overseas.

*Personal income* is the total income, whether in cash or kind, received by persons normally resident in Australia. It includes both income received in return for productive activity (such as wages, salaries and supplements, incomes of unincorporated enterprises, etc.) and transfer incomes (such as cash social service benefits, interest, etc.). Personal income also includes any property income received by non-profit organisations such as private schools, churches, charitable organisations, etc. However, it excludes any income which might be said to accrue to persons in the form of undistributed company income and retained investment income of life insurance, etc., funds.

#### Framework of accounts and sectors

In the accounts shown in Tables 1 and 3 to 8 four internal sectors are distinguished—trading enterprises, financial enterprises, persons and general government. In addition, there is an overseas sector which shows a summary of the transactions into which overseas governments, persons and businesses enter with Australian residents. All the internal sectors engage in productive activity, but in the tables a national production account for the whole economy is shown instead of separate accounts for each sector. Similarly, the tables show only a national capital account for the economy, but a current (or income appropriation) account is shown for each sector. The system of accounts as thus envisaged is a completely articulated system in that a credit in any account must be matched with a corresponding debit in some other account—or in the same account if a complete consolidation of the transactions appropriate to that account has not been carried through.

The framework of sectors and accounts underlying the form of social accounts shown in this Year Book is set out in the following diagram. As stated in the previous paragraph, each sector could be envisaged as having separate production, appropriation and capital accounts, but in the tables compiled for Australia the production and capital accounts have been combined. In the diagram the solid rectangles depict the actual form of the tables, and the remaining rectangles show the full amount of detail which would be needed to provide a complete articulation of the accounts. The appropriate number of each table on pages 473–7 is shown on the left of the diagram.



### Description of the accounts

The *national production account* is a consolidation of the production accounts of all producers regardless of sector. The production account is shown as receiving revenue from the sale of goods and services to final buyers; all intermediate usage of goods and services is cancelled out, since it represents a cost to one producer to offset the revenue of the other. On the payments side are shown the payments of indirect taxes, and, since the account is presented from the point of view of the producing unit, the wages and salaries paid to employees. The balance is the gross operating surplus which is carried to the trading enterprises income appropriation account. In input-output tables, the national production account is broken up into accounts for separate industries, and transactions associated with intermediate usage of goods and services are shown in the production accounts for the separate industries.

The *trading enterprises income appropriation account* is shown as receiving the gross operating surpluses from the national production account and property incomes (dividends, non-dwelling rent and interest) from other sectors. This total of receipts is appropriated to depreciation allowances and to various transfer payments (interest, etc., paid, income tax payable, dividends payable and undistributed income). All net income of unincorporated enterprises is treated as being transferred to persons and the same is true of personal income from dwelling rent. Any income of trading companies not distributed but retained for use in the business is shown as undistributed income and transferred to the national capital account either directly or by way of the overseas current account (where accruing to non-residents).

The *financial enterprises income appropriation account* is, in the main, similar to the preceding account. However, there is no operating surplus, as property income (which is treated as transfer income, not as income of factors of production) is the sole receipt.

The *personal current account* records all receipts on current account whether of factor incomes (wages and salaries) or transfer incomes (interest, etc., dividends, net business incomes, cash benefits from public authorities, and transfers from overseas). On the payments side are shown current payments for goods and services and transfer payments (taxes, interest, etc., transfers overseas). The balance is transferred to the national capital account under the heading of personal saving.

The *general government current account* reflects a distinction between current and capital expenditure, which is necessarily arbitrary in some measure and has been made on the basis of excluding from the current account, expenditure on public works and increase in stocks. Expenditure on public works is taken to include new buildings, construction, plant and machinery, and any replacement of assets charged to loan funds or capital works votes. Current account excludes all expenditure on roads, because a satisfactory distinction between new works and maintenance cannot be made. All defence expenditure is included in the current account.

The income of public enterprises shown in this account is derived by deducting from their operating surplus any depreciation shown by these enterprises in their published accounts, except in the case of enterprises which are at present analysed on the basis of cash accounts in which depreciation is not allowed (usually enterprises whose accounts are included in Commonwealth or State public accounts). These depreciation allowances are included in the public authorities capital account. As in the case of persons, all overseas gifts are included in the current account. These include gifts for international relief, technical assistance, etc., grants, contributions to international organisations and expenditure in connection with the administration of Papua New Guinea.

The *overseas current account* records all transactions of a current nature between Australian and overseas residents. It should be emphasised that this account is shown here from the point of view of overseas residents, i.e. receipts from Australia are shown as credits, and payments to Australia as debits. Australians temporarily overseas are regarded as residents, and visitors to Australia as non-residents.

Capital transactions of the four domestic sectors and the net deficit on current account with overseas are shown in the *national capital account*. On the receipts side are shown the savings of the various sectors—saving by enterprises, personal saving, the retained investment income of insurance funds, and the surplus on general government current account. Net apparent capital inflow from overseas and withdrawal from monetary reserves are reflected in the item 'overseas balance on current account'. On the payments side are shown the purchases by all sectors of new buildings and capital equipment and the value of physical changes in stocks. The private component of capital expenditure includes new dwellings, additions and major alterations to dwellings and expenditure of a capital nature by private non-profit institutions (churches, schools, clubs, etc.) but excludes motor vehicles for personal use and other durable consumer goods, which are included in personal consumption expenditure.



### Estimates at constant prices

For certain types of economic analysis it is useful to examine estimates of the principal flows of goods and services in the economy revalued in such a way as to remove the direct effects of changes in their prices which have occurred over the period under review. Such estimates, conventionally described as 'at constant prices', are presented in Tables 2 and 9 for gross national product, exports and imports of goods and services, and gross national expenditure and its principal components.

In concept, constant price estimates may be thought of as being derived by expressing the value of every component commodity as the product of a price and a quantity, and by substituting for each actual current price the corresponding price in the chosen base year. Aggregates at constant prices for each year are then obtained by summation. In practice, the quality and quantity of the available data are such that a number of methods are used in the preparation of estimates at constant prices. These estimates involve approximations and assumptions, and this should be borne in mind in the interpretation and use of the results.

Gross national product is equivalent to gross national expenditure, plus exports of goods and services, less imports of goods and services. This relationship has been used in deriving the estimates of gross national product at constant prices shown in Table 2. A supplement to the bulletin *Australian National Accounts, National Income and Expenditure*, 1953-54 to 1966-67 entitled *Estimates of Gross Product by Industry at Current and Constant Prices*, 1959-60 to 1965-66 contains estimates of gross national product measured by the 'production method'.

For a considerable part of personal consumption expenditure and exports and imports of goods and services, it is possible to identify specific units of quantity and price, and revalue the quantities at base year prices. Where it is not possible to express the values in successive years as the product of prices and homogeneous units of quantity, the treatment generally adopted is to divide values by appropriate price indexes.

With the remaining components of gross national expenditure, a greater degree of approximation and assumption is involved. For example, when information about the commodity content of a flow is limited (e.g. various components of gross fixed capital expenditure), special purpose price indexes relating to selected commodities are applied to the expenditure on the full range of commodities they represent. In other cases, for instance, where the expenditure relates to 'unique' goods (e.g. goods not homogeneous from year to year), revaluation is achieved by use of an index reflecting the price change of the direct materials and direct labour components of the unique goods in question. This method of revaluation is also applied to current expenditure by financial enterprises and general government. The resulting estimates have, therefore, considerable limitations for many uses, for example in studies of productivity.

The method used to estimate the value of physical changes in stocks involves first reducing the increase in book values of stocks by an estimate of the stock valuation adjustment to obtain the measures at current prices, and then revaluing the latter to arrive at the estimates at constant prices. The stock valuation adjustment has to be made because existing stocks are sometimes explicitly revalued (for example, such revaluations are sometimes made by business enterprises so as to show stocks at the lower of cost or market value for balance sheet purposes) or more commonly, because stocks used or disposed of are replaced by new stocks of the same goods but at different prices.

Part 1 of *Australian National Accounts, National Income and Expenditure*, 1970-71 contains a fuller discussion of the conceptual problems involved in making these estimates and Appendix B of that publication contains a brief account of the sources and methods used in preparing the estimates.

### Reliability and revisions

Estimates of national income and expenditure are necessarily prepared from a very wide range of statistical information, some of which is available quickly, some of it only with a delay of several years after the period to which it relates. Some of it is closely related to the desired national income concepts, but some of it is not completely satisfactory in various respects, including coverage, concepts and timing. Estimates, in particular for the most recent years, are therefore subject to revision.

This applies particularly to estimates based on income tax statistics—income of companies, non-farm unincorporated enterprises, depreciation, and part of gross private fixed investment—which are subject to substantial revisions for the last two years, as tabulations of income tax statistics do not become available until about twenty-two months after the end of each financial year.

It is not possible to put precise limits on the degree of revision likely to any particular series, nor to state degrees of reliability in a statistical sense. These depend in large part on the range and quality of the basic statistical data. For illustrations of common causes of revisions reference should be made to *Australian National Accounts, National Income and Expenditure*, 1970-71.

## National income and expenditure tables

(For explanatory note on item numbers see Note following Table 3.)

TABLE 1  
NATIONAL PRODUCTION ACCOUNT  
(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71
Net current expenditure on goods and services—					
5 Personal consumption . . . . .	13,676	14,867	15,959	17,430	19,062
6 Financial enterprises . . . . .	307	328	374	414	467
7 General government . . . . .	2,732	3,084	3,367	3,683	4,233
Gross fixed capital expenditure—					
8 Private . . . . .	3,829	4,156	4,688	5,161	5,787
9 Public enterprises . . . . .	1,175	1,313	1,382	1,503	1,543
10 General government . . . . .	965	1,034	1,137	1,228	1,369
11 Value of physical changes in stocks . . . . .	360	131	674	500	423
12 Statistical discrepancy . . . . .	-62	-46	9	155	245
<i>Gross national expenditure</i> . . . . .	22,982	24,867	27,590	30,074	33,129
13 Exports of goods and services . . . . .	3,478	3,559	3,892	4,748	5,054
4 <i>less</i> Imports of goods and services . . . . .	3,703	4,147	4,267	4,751	5,096
<b>Gross national product</b> . . . . .	<b>22,757</b>	<b>24,279</b>	<b>27,215</b>	<b>30,071</b>	<b>33,087</b>
1 Wages, salaries and supplements . . . . .	11,674	12,696	14,046	15,763	18,061
Gross operating surplus of trading enterprises—					
2a Companies . . . . .	3,164	3,588	4,027	4,580	4,715
2b Unincorporated enterprises . . . . .	3,884	3,549	4,191	4,226	4,262
2c Dwellings owned by persons . . . . .	1,034	1,147	1,276	1,454	1,692
2d Public enterprises . . . . .	720	807	927	1,024	1,024
<i>Gross national product at factor cost</i> . . . . .	20,476	21,787	24,467	27,047	29,754
3 Indirect taxes less subsidies . . . . .	2,281	2,492	2,748	3,024	3,333
<b>Gross national product</b> . . . . .	<b>22,757</b>	<b>24,279</b>	<b>27,215</b>	<b>30,071</b>	<b>33,087</b>
Gross farm product (at market prices) . . . . .	2,358	1,840	2,336	2,175	2,033
Gross non-farm product (at market prices) . . . . .	20,399	22,439	24,879	27,896	31,054

TABLE 2  
VALUE OF MAIN AGGREGATES AT AVERAGE 1966-67 PRICES  
(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71
Net current expenditure on goods and services—					
Personal consumption . . . . .	13,676	14,413	15,050	15,872	16,357
Financial enterprises . . . . .	307	308	338	335	360
General government . . . . .	2,732	2,944	3,055	3,146	3,290
Gross fixed capital expenditure—					
Private . . . . .	3,829	4,055	4,417	4,675	4,932
Public . . . . .	2,140	2,267	2,344	2,418	2,434
Value of physical changes in stocks . . . . .	360	142	712	488	421
Statistical discrepancy . . . . .	-62	-45	8	148	220
<i>Gross national expenditure</i> . . . . .	22,982	24,084	25,924	27,082	28,014
Exports of goods and services . . . . .	3,478	3,689	3,961	4,720	5,111
<i>Less</i> Imports of goods and services . . . . .	3,703	4,144	4,264	4,698	4,842
<b>Gross national product</b> . . . . .	<b>22,757</b>	<b>23,629</b>	<b>25,621</b>	<b>27,104</b>	<b>28,283</b>
Gross farm product . . . . .	2,358	1,948	2,645	2,509	2,572
Gross non-farm product . . . . .	20,399	21,681	22,976	24,595	25,711

TABLE 3  
TRADING ENTERPRISES INCOME APPROPRIATION ACCOUNT  
(\$ million)

		1966-67	1967-68	1968-69	1969-70	1970-71
2	Gross operating surplus . . . . .	8,802	9,091	10,421	11,284	11,693
15b, 17b	Interest, etc., and dividends received . . . . .	164	184	210	226	232
18b	Undistributed income accruing from overseas . . . . .	13	20	20	25	16
	<b>Total receipts . . . . .</b>	<b>8,979</b>	<b>9,295</b>	<b>10,651</b>	<b>11,535</b>	<b>11,941</b>
14a	Depreciation allowances . . . . .	1,988	2,182	2,364	2,570	2,772
15a	Interest, etc., paid . . . . .	1,061	1,195	1,357	1,588	1,835
	Company income—					
16a	Income tax payable . . . . .	812	954	1,101	1,372	n.a.
17a	Dividends payable . . . . .	641	685	780	866	n.a.
18a	Undistributed income . . . . .	555	670	737	730	n.a.
	<b>Total company income . . . . .</b>	<b>2,008</b>	<b>2,309</b>	<b>2,618</b>	<b>2,968</b>	<b>2,849</b>
19	Unincorporated enterprises income . . . . .	2,931	2,507	3,070	3,017	2,973
20	Personal income from dwelling rent . . . . .	552	611	674	772	915
21a	Public enterprises income . . . . .	439	491	568	620	597
	<b>Total outlay . . . . .</b>	<b>8,979</b>	<b>9,295</b>	<b>10,651</b>	<b>11,535</b>	<b>11,941</b>

NOTE. Items in Tables 1 and 3 to 8 are numbered from 1 to 28, with or without the addition of a letter, and this system is used to identify the corresponding credit and debit entries in the accounts and as a key to the notes on pages 480-3. In some cases the items correspond exactly, while in other cases an entry in one table is the sum of two or more entries in other tables; here the total is given a number, and the components have a number and a letter. In the remaining type of case all entries are given the same number and a distinguishing letter, because in this group one item is not the sum of one or more entries. The relationship between these items can still be traced through because the sum of all credit entries must equal the sum of all debit entries.

TABLE 4  
FINANCIAL ENTERPRISES INCOME APPROPRIATION ACCOUNT  
(\$ million)

		1966-67	1967-68	1968-69	1969-70	1970-71
15d	Interest, etc., received . . . . .	1,372	1,532	1,735	1,992	2,295
17d, 18d	Dividends received and undistributed income accruing from overseas . . . . .	42	48	58	67	76
	<b>Total receipts . . . . .</b>	<b>1,414</b>	<b>1,580</b>	<b>1,793</b>	<b>2,059</b>	<b>2,371</b>
14b	Depreciation allowances . . . . .	33	42	55	67	78
6	Net current expenditure on goods and services . . . . .	307	328	374	414	467
15c	Interest paid . . . . .	465	497	589	678	793
	Company income—					
16b	Income tax payable . . . . .	60	77	90	102	n.a.
17c	Dividends payable . . . . .	47	46	51	59	n.a.
18c	Undistributed income . . . . .	32	49	43	61	n.a.
	<b>Total company income . . . . .</b>	<b>139</b>	<b>172</b>	<b>184</b>	<b>222</b>	<b>255</b>
21b	Public enterprises income . . . . .	134	161	172	196	230
22	Retained investment income of life insurance funds, etc. . . . .	336	380	419	482	548
	<b>Total outlay . . . . .</b>	<b>1,414</b>	<b>1,580</b>	<b>1,793</b>	<b>2,059</b>	<b>2,371</b>



TABLE 5  
PERSONAL CURRENT ACCOUNT  
(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71
1 Wages, salaries and supplements . . . . .	11,674	12,096	14,046	15,765	18,061
15f Interest, etc., received . . . . .	578	631	706	783	863
17e Dividends . . . . .	434	486	506	564	585
19a Unincorporated enterprises income . . . . .	2,931	2,507	3,070	3,017	2,973
20 Income from dwelling rent . . . . .	552	611	674	772	915
23b Transfers from overseas . . . . .	136	156	165	182	177
25 Cash benefits from general government . . . . .	1,271	1,323	1,444	1,640	1,818
<b>Total receipts . . . . .</b>	<b>17,576</b>	<b>18,410</b>	<b>20,611</b>	<b>22,721</b>	<b>25,392</b>
5 Consumption expenditure . . . . .	13,676	14,867	15,959	17,430	19,062
15e Interest paid . . . . .	186	200	226	251	280
16c Direct taxes (payable) on income . . . . .	1,886	2,032	2,368	2,721	2,981
16d Other direct taxes, fees, fines, etc. . . . .	285	322	366	391	404
23a Transfers overseas . . . . .	79	84	90	111	132
24 Saving . . . . .	1,464	905	1,602	1,817	2,533
<b>Total outlay . . . . .</b>	<b>17,576</b>	<b>18,410</b>	<b>20,611</b>	<b>22,721</b>	<b>25,392</b>

TABLE 6  
GENERAL GOVERNMENT CURRENT ACCOUNT  
(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71
3a Indirect taxes . . . . .	2,450	2,685	2,971	3,287	3,593
16e Direct taxes (paid) on income . . . . .	2,725	3,031	3,411	4,046	4,606
16d Other direct taxes, fees, fines, etc. . . . .	285	322	366	391	404
15h Interest, etc., received . . . . .	115	100	117	142	183
21 Public enterprises income . . . . .	573	652	740	816	827
<b>Total receipts . . . . .</b>	<b>6,148</b>	<b>6,790</b>	<b>7,605</b>	<b>8,682</b>	<b>9,613</b>
7 Net current expenditure on goods and services . . . . .	2,732	3,084	3,367	3,683	4,233
3b Subsidies . . . . .	169	193	223	264	260
15g Interest, etc., paid . . . . .	574	632	676	736	783
23c Transfers overseas . . . . .	151	154	159	180	185
25 Cash benefits to persons . . . . .	1,271	1,323	1,444	1,640	1,818
26 Grants for private capital purposes . . . . .	56	76	46	51	53
27 Surplus on current account . . . . .	1,195	1,328	1,690	2,128	2,281
<b>Total outlay . . . . .</b>	<b>6,148</b>	<b>6,790</b>	<b>7,605</b>	<b>8,682</b>	<b>9,613</b>

TABLE 7  
OVERSEAS CURRENT ACCOUNT  
(\$ million)

		1966-67	1967-68	1968-69	1969-70	1970-71
4a	Imports f.o.b. . . . .	2,837	3,159	3,203	3,553	3,790
4b	Transportation . . . . .	554	655	699	754	826
4c	Travel . . . . .	133	140	150	176	187
4d	Government transactions . . . . .	81	95	111	124	127
4e	Other goods and services . . . . .	98	98	104	144	166
4	<i>Imports of goods and services</i> . . . . .	3,703	4,147	4,267	4,751	5,096
15j	Interest, etc. paid overseas . . . . .	167	186	212	243	258
17g	Dividends payable and profits remitted . . . . .	183	188	223	266	245
18f	Undistributed income accruing to overseas residents . . . . .	115	229	280	295	322
23a	Personal transfers overseas . . . . .	79	84	90	111	132
23c	General government transfers . . . . .	151	154	159	180	185
	<b>Total credits to non-residents</b> . . . . .	<b>4,398</b>	<b>4,988</b>	<b>5,231</b>	<b>5,846</b>	<b>6,238</b>
13a	Exports f.o.b. . . . .	2,926	2,942	3,217	3,967	4,213
13b	Transportation . . . . .	320	362	392	445	480
13c	Travel . . . . .	70	88	108	124	144
13d	Government transactions . . . . .	83	76	80	87	81
13e	Other goods and services . . . . .	79	91	95	126	136
13	<i>Exports of goods and services</i> . . . . .	3,478	3,559	3,892	4,748	5,054
15i, 17f	Interest, etc., received and dividends receivable from overseas . . . . .	110	109	130	131	137
18e	Undistributed income accruing from overseas . . . . .	13	20	20	25	16
23b	Personal transfers from overseas . . . . .	136	156	165	182	177
28	Overseas balance on current account . . . . .	661	1,144	1,024	760	854
	<b>Total debits to non-residents</b> . . . . .	<b>4,398</b>	<b>4,988</b>	<b>5,231</b>	<b>5,846</b>	<b>6,238</b>

TABLE 8  
NATIONAL CAPITAL ACCOUNT  
(\$ million)

		1966-67	1967-68	1968-69	1969-70	1970-71
14	Depreciation allowances . . . . .	2,021	2,224	2,419	2,637	2,850
16f, 17h	Increase in dividend and income tax provisions	62	41	190	175	-82
18g	Undistributed company income accruing to residents . . . . .	472	490	500	496	330
22	Retained investment income of life insurance funds, etc. . . . .	336	380	419	482	548
24	Personal saving . . . . .	1,464	905	1,602	1,817	2,533
26a	General government grants for private capital purposes . . . . .	56	76	46	51	53
27	Surplus on general government current account . . . . .	1,195	1,328	1,690	2,129	2,281
	Overseas balance on current account—					
28a	Withdrawal from overseas monetary reserves(a) . . . . .	124	-79	-148	-37	-602
28b	Net apparent capital inflow . . . . .	537	1,223	1,172	797	1,456
	<b>Total capital funds accruing . . . . .</b>	<b>6,267</b>	<b>6,588</b>	<b>7,890</b>	<b>8,547</b>	<b>9,367</b>
	Gross fixed capital expenditure—					
	Private—					
8a	Dwellings . . . . .	991	1,112	1,299	1,490	1,530
8b	Other building and construction . . . . .	738	884	1,014	1,114	1,387
8c	All other . . . . .	2,100	2,160	2,375	2,557	2,870
9	Public enterprises . . . . .	1,175	1,313	1,382	1,503	1,543
10	General government . . . . .	965	1,034	1,137	1,228	1,369
	<i>Total gross fixed capital expenditure . . . . .</i>	<i>5,969</i>	<i>6,503</i>	<i>7,207</i>	<i>7,892</i>	<i>8,699</i>
11	Value of physical changes in stocks—					
	Farm . . . . .	203	-156	348	75	-102
	Non-farm . . . . .	157	284	326	425	525
	<i>Total use of funds . . . . .</i>	<i>6,329</i>	<i>6,634</i>	<i>7,881</i>	<i>8,392</i>	<i>9,122</i>
12	Statistical discrepancy . . . . .	-62	-46	9	155	245
	<b>Total capital funds accruing . . . . .</b>	<b>6,267</b>	<b>6,588</b>	<b>7,890</b>	<b>8,547</b>	<b>9,367</b>

(a) In item 28a minus sign (-) indicates an addition to reserves.

TABLE 9  
GROSS FIXED CAPITAL EXPENDITURE AND VALUE OF PHYSICAL CHANGES IN STOCKS AT AVERAGE 1966-67 PRICES  
(\$ million)

		1966-67	1967-68	1968-69	1969-70	1970-71
	Gross fixed capital expenditure—					
	Private—					
	Dwellings . . . . .	991	1,079	1,226	1,354	1,328
	Other building and construction . . . . .	738	861	942	989	1,158
	All other . . . . .	2,100	2,115	2,249	2,332	2,446
	<i>Total private . . . . .</i>	<i>3,829</i>	<i>4,055</i>	<i>4,417</i>	<i>4,675</i>	<i>4,932</i>
	Public . . . . .	2,140	2,267	2,344	2,418	2,434
	<b>Total . . . . .</b>	<b>5,969</b>	<b>6,322</b>	<b>6,761</b>	<b>7,093</b>	<b>7,366</b>
	Value of physical changes in stocks—					
	Farm . . . . .	157	283	316	421	535
	Non-farm . . . . .	203	-141	396	67	-113
	<b>Total . . . . .</b>	<b>360</b>	<b>142</b>	<b>712</b>	<b>488</b>	<b>421</b>



TABLE 10  
RELATIONSHIP OF MAIN AGGREGATES  
(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71
Net current expenditure on goods and services . . . . .	16,715	18,279	19,700	21,527	23,762
Gross fixed capital expenditure . . . . .	5,969	6,503	7,207	7,892	8,699
Value of physical changes in stocks . . . . .	360	131	674	500	423
Statistical discrepancy . . . . .	-62	-46	9	155	245
<b>Gross national expenditure . . . . .</b>	<b>22,982</b>	<b>24,867</b>	<b>27,590</b>	<b>30,074</b>	<b>33,129</b>
<i>Plus</i> Exports of goods and services . . . . .	3,478	3,559	3,892	4,748	5,054
<b>National turnover of goods and services . . . . .</b>	<b>26,460</b>	<b>28,426</b>	<b>31,482</b>	<b>34,822</b>	<b>38,183</b>
<i>Less</i> Imports of goods and services . . . . .	3,703	4,147	4,267	4,751	5,096
<b>Gross national product . . . . .</b>	<b>22,757</b>	<b>24,279</b>	<b>27,215</b>	<b>30,071</b>	<b>33,087</b>
<i>Less</i> Indirect taxes <i>less</i> subsidies . . . . .	2,281	2,492	2,748	3,024	3,333
<b>Gross national product at factor cost . . . . .</b>	<b>20,476</b>	<b>21,787</b>	<b>24,467</b>	<b>27,047</b>	<b>29,754</b>
<i>Less</i> Depreciation allowances of trading enterprises . . . . .	1,988	2,182	2,364	2,570	2,772
<b>Net national product . . . . .</b>	<b>18,488</b>	<b>19,605</b>	<b>22,103</b>	<b>24,477</b>	<b>26,982</b>
<i>Less</i> Net income payable overseas . . . . .	342	474	565	648	672
<b>National income . . . . .</b>	<b>18,146</b>	<b>19,131</b>	<b>21,538</b>	<b>23,829</b>	<b>26,310</b>
<i>Plus</i> Net income payable overseas . . . . .	342	474	565	648	672
<b>Net national product . . . . .</b>	<b>18,488</b>	<b>19,605</b>	<b>22,103</b>	<b>24,477</b>	<b>26,982</b>
<i>Less</i> Net operating surplus of companies and public enterprises . . . . .	2,721	3,091	3,516	4,009	3,991
<i>Less</i> Interest, etc. paid by unincorporated enterprises and dwellings owned by persons . . . . .	610	700	797	916	1,042
<i>Plus</i> Interest received by persons . . . . .	578	631	706	783	863
Dividends received by persons . . . . .	434	486	506	564	585
Cash benefits to persons . . . . .	1,271	1,323	1,444	1,640	1,818
Transfers from overseas . . . . .	136	156	165	182	177
<b>Personal income . . . . .</b>	<b>17,576</b>	<b>18,410</b>	<b>20,611</b>	<b>22,721</b>	<b>25,392</b>
<i>Less</i> Direct taxes (payable) on income . . . . .	1,886	2,032	2,368	2,721	2,981
Other direct taxes, fees, fines, etc. . . . .	285	322	366	391	404
<b>Personal disposable income . . . . .</b>	<b>15,405</b>	<b>16,056</b>	<b>17,877</b>	<b>19,609</b>	<b>22,007</b>

TABLE 11  
MAIN AGGREGATES AT CURRENT PRICES, 1948-49 TO 1970-71  
(\$ million)

Year	1 <i>Personal Consump- tion</i>	2 <i>Net current expenditure on goods and services by general government and financial enterprises</i>	3 <i>Private gross fixed capital expenditure</i>	4 <i>Public gross fixed capital expenditure</i>	5 <i>Value of physical changes in stocks</i>	6 <i>Statistical discrepancy</i>	7 <i>Gross national expenditure</i> (1 to 6)
1948-49	2,995	395	497	295	37	-35	4,184
1949-50	3,449	474	644	420	72	21	5,080
1950-51	4,197	642	921	603	144	-67	6,440
1951-52	5,001	877	1,132	806	384	61	8,261
1952-53	5,308	1,008	1,143	794	-256	-247	7,750
1953-54	5,828	964	1,320	808	66	-118	8,868
1954-55	6,335	1,041	1,482	871	173	27	9,929
1955-56	6,807	1,166	1,640	927	208	-64	10,684
1956-57	7,276	1,223	1,717	950	-46	-167	10,953
1957-58	7,632	1,264	1,858	998	14	-23	11,743
1958-59	8,033	1,381	1,922	1,100	277	-79	12,634
1959-60	8,803	1,508	2,191	1,208	152	97	13,959
1960-61	9,329	1,619	2,415	1,250	480	37	15,130
1961-62	9,624	1,755	2,328	1,389	-218	-103	14,775
1962-63	10,316	1,865	2,580	1,440	260	-107	16,354
1963-64	11,117	2,042	2,919	1,590	125	-104	17,689
1964-65	12,003	2,330	3,410	1,842	569	32	20,191
1965-66	12,730	2,695	3,656	2,042	117	-59	21,181
1966-67	13,676	3,039	3,829	2,140	360	-62	22,982
1967-68	14,867	3,412	4,156	2,347	131	-46	24,867
1968-69	15,959	3,741	4,688	2,519	674	9	27,590
1969-70	17,430	4,097	5,161	2,731	500	155	30,074
1970-71	19,062	4,700	5,787	2,912	423	245	33,129

Year	8 <i>Exports of goods and services</i>	9 <i>Imports of goods and services</i>	10 (7+8-9) <i>Gross national product</i>	11 <i>National income</i>	12 <i>Personal income</i>	13 <i>Wages, salaries and supple- ments</i>	14 <i>Net income payable overseas</i>
1948-49	1,146	979	4,351	3,624	3,736	2,171	81
1949-50	1,307	1,260	5,127	4,189	4,381	2,473	102
1950-51	2,092	1,726	6,806	5,699	5,995	3,115	120
1951-52	1,486	2,437	7,310	6,037	6,242	3,941	126
1952-53	1,855	1,312	8,293	6,983	6,983	4,263	119
1953-54	1,793	1,601	9,060	7,516	7,303	4,542	159
1954-55	1,707	1,983	9,653	7,928	7,813	4,972	164
1955-56	1,740	1,953	10,471	8,543	8,476	5,454	189
1956-57	2,190	1,736	11,407	9,266	9,048	5,769	189
1957-58	1,847	1,925	11,665	9,252	9,037	5,992	187
1958-59	1,868	1,960	12,542	9,939	9,720	6,287	254
1959-60	2,150	2,286	13,823	10,978	10,675	6,977	284
1960-61	2,175	2,604	14,701	11,670	11,458	7,516	264
1961-62	2,471	2,205	15,041	12,014	11,833	7,741	217
1962-63	2,493	2,621	16,226	12,942	12,585	8,170	284
1963-64	3,163	2,873	17,979	14,383	13,912	8,886	305
1964-65	3,048	3,486	19,753	15,823	15,185	9,932	291
1965-66	3,137	3,630	20,688	16,406	15,899	10,699	319
1966-67	3,478	3,703	22,757	18,146	17,576	11,674	342
1967-68	3,559	4,147	24,279	19,131	18,410	12,696	474
1968-69	3,892	4,267	27,215	21,538	20,611	14,046	565
1969-70	4,748	4,751	30,071	23,829	22,721	15,763	648
1970-71	5,054	5,096	33,087	26,310	25,392	18,061	672

## Description of items in the National Income and Expenditure Accounts

### Tables 1 and 3 to 8

*Item 1. Wages, salaries and supplements.* Payments in the nature of wages and salaries as defined for pay-roll tax, including allowances for income in kind (board and quarters, etc.), together with supplements to wages, and pay and allowances of members of the forces. In addition to wages and salaries paid by employers subject to pay-roll tax, this item includes wages and salaries paid by employers not subject to pay-roll tax, based on estimates of employment and average earnings. Supplements consist of employers' contributions to pension and superannuation funds, direct payments of pensions and retiring allowances, and amounts paid as workers' compensation for injuries. Pay and allowances of members of the forces consist of active pay, field, subsistence and dependants' allowances, and the value to the members of the forces of food, clothing, normal medical attention, etc. supplied in kind. They include deferred pay, but exclude war gratuities which are included in item 25.

*Item 2. Gross operating surplus of trading enterprises.* The operating surplus, before deduction of depreciation provisions, dividends, interest, rent and royalties, and direct taxes payable, but after deducting stock valuation adjustment, of all trading enterprises operating in Australia. Trading enterprises include all companies, public enterprises, partnerships and self-employed persons engaged in the production of goods and services for sale, but exclude financial enterprises. Public trading enterprises are government undertakings which attempt to recover all, or a substantial part, of their costs through charges made to the public for the sale of goods and services. All owners of dwellings are included whether they let the dwellings or occupy them themselves. Trading enterprises' gross operating surplus is shown separately for companies (item 2a), unincorporated enterprises (item 2b), dwellings owned by persons (item 2c), and public enterprises (item 2d).

*Item 3. Indirect taxes less subsidies.* Indirect taxes (item 3a) are taxes assessed on producers, i.e. enterprises and general government in respect of the production, sale, purchase or use of goods and services, which are charged to the expenses of production. Subsidies (item 3b) are grants made by general government to enterprises which are credited to their production accounts. These grants may take the form of bounties on goods produced, payments to ensure a guaranteed price or to enable maintenance of prices of goods or services before cost of production, and other forms of assistance to producers.

*Item 4. Imports of goods and services.* The value of goods imported from overseas and amounts payable overseas for services. In table 7 this item is sub-divided into the following components.

*Item 4a. Imports f.o.b.* Recorded trade figures adjusted for the purpose of balance of payments estimates. The principal adjustments are the addition of unrecorded imports, including ships and aircraft for use on overseas routes, the subtraction of films imported on a rental basis, imports of gold, passengers' personal effects, goods for repair and goods intended for re-export, and the deduction of a 'valuation adjustment' representing the excess of the recorded value of imports (based on value for duty) over the estimated selling price to the importer as shown on invoices accompanying customs entries.

*Item 4b. Transportation* Freight payable to foreign carriers on goods imported into Australia and transported between Australian ports, fares payable in Australia including fares paid by the Commonwealth government for the carriage of migrants under various assisted passage schemes. It also includes the overseas expenditure of Australian ships and aircraft, and premiums (less claims) on marine insurance payable overseas on imports into Australia, less the net earnings on marine insurance business undertaken by Australian firms in respect of both exports and imports.

*Item 4c. Travel.* Expenditure less refunds, by Australians visiting overseas for pleasure and for business, which may take the form of travellers' cheques, letters of credit, etc.

*Item 4d. Government transactions.* Expenditure overseas for defence, including the pay and allowances of personnel serving overseas, expenditure overseas on diplomatic, consular and trade representation, government pensions paid abroad, administrative expenditure overseas on immigration, and other miscellaneous payments for services.

*Item 4e. Other goods and services.* Cinema and television film rentals payable overseas, expenses of Australian firms transacting business overseas, commissions, brokerage, etc., and the value of repairs on goods previously exported for repair and return, etc.

*Item 5. Net current expenditure on goods and services—personal consumption.* Net expenditure on goods and services for purposes of consumption by persons and private non-profit making bodies serving persons. This item excludes the purchase of dwellings and capital expenditure by non-profit making bodies (included in item 8), and maintenance of dwellings (treated as expenses of private



enterprises), but includes personal expenditure on motor vehicles and other durable goods and the imputed rent of owner-occupied dwellings. Purchase of motor vehicles is the estimated expenditure by persons on new motor vehicles, second-hand motor vehicles purchased from business enterprises and general government, and net dealers' margins on purchases and sales of motor vehicles within the personal sector. Motor vehicles include cars, station wagons, motor cycles, and motor scooters bought on personal account. The value of income in kind (e.g. food produced and consumed on farms, board and lodging provided free to employees) is included in both personal income and personal consumption expenditure, but goods chargeable to business (expense) accounts are excluded.

*Item 6. Net current expenditure on goods and services—financial enterprises.* The current expenditure of banks, instalment credit companies, short-term money market companies, and building societies after deduction of bank charges to customers. Charges by instalment credit companies are treated as interest receipts and therefore are not offset against expenditure. This item includes wages, salaries and supplements, indirect taxes, and other payments for goods and services. Public financial enterprises are government businesses (mainly banks, including the Reserve Bank) which operate in a manner analogous to other financial enterprises, in that their current expenditure is largely financed by the net receipt of interest. The interest received by government housing authorities is treated as a receipt by public financial enterprises, but their other receipts, including net profit on sale of houses, and all their expenditure, are included in those of public trading enterprises.

*Item 7. Net current expenditure on goods and services—general government.* Expenditure by public authorities (other than those classified as public enterprises) which does not result in the creation of fixed tangible assets or in the acquisition of land, buildings or second-hand goods (other than imported). It comprises expenditure on wages, salaries, and supplements, and on goods and services other than fixed assets and stocks. Fees, etc. charged by general government for goods sold and services rendered are offset against purchases. Net expenditure overseas by general government and purchases from public enterprises are included. All government expenditure on defence is classified as current.

*Item 8. Gross fixed capital expenditure—private.* Expenditure on fixed assets whether for additions or replacements. This item includes expenditure on dwellings (item 8a), other building and construction (item 8b), and vehicles, plant, machinery, etc. (item 8c). It includes also expenditure on second-hand assets as well as new assets, less sales of existing assets. Expenditure on ordinary repair and maintenance of fixed assets is excluded as being chargeable to current account. Major additions are, however, regarded as capital expenditure. Dwellings purchased by persons from public housing authorities, including previously rented houses, are included in private capital expenditure.

*Item 9. Gross fixed capital expenditure—public enterprises.* Expenditure on new fixed assets whether for additions or replacements, including wages and salaries paid by public enterprises in connection with capital works. Expenditure on houses and flats is estimated by deducting the cost of previously rented dwellings sold to the private sector from the estimated expenditure on construction of dwellings. The sales value of these previously rented dwellings is included in private capital expenditure.

*Item 10. Gross fixed capital expenditure—general government.* Expenditure on new fixed assets whether for additions or replacements, other than for defence purposes. Because it has not been possible to make a satisfactory dissection, all expenditure on roads, including maintenance, is classified as fixed capital expenditure.

*Item 11. Value of physical changes in stocks.* The value of physical changes in stocks of trading enterprises and general government. The value of physical changes in stocks is calculated on a quarterly basis as the difference between the beginning and end-of-quarter estimates of stock levels, both revalued at average current-quarter prices by means of appropriate price indexes.

*Item 12. Statistical discrepancy.* The difference between the sum of the direct estimates of gross national product and imports of goods and services on the one hand and the sum of the estimates of components of gross national expenditure and exports of goods and services on the other hand. Conceptually these two totals are the same. Inclusion of the discrepancy on the expenditure side of the national production account implies nothing as to the relative accuracy of the estimates of gross national product and expenditure. Similarly its inclusion in the capital account does not imply that estimates in this table are less accurate than those in other tables, or that capital expenditure estimates are less accurate than estimates on the receipts side of this account.

*Item 13. Exports of goods and services.* The value of goods exported overseas and receipts from overseas for other goods and services. In Table 7 this item is sub-divided into the following components.

*Item 13a. Exports f.o.b.* The recorded trade figures adjusted for balance of payments purposes. The adjustments are similar to those made to the recorded import figures except that no change is made to the basis of valuation.

*Item 13b. Transportation.* The expenditure of overseas carriers in Australian ports, the overseas earnings of ships owned or chartered by Australian operators, and earnings by Australian airlines overseas.

*Item 13c. Travel.* Expenditure less refunds by persons visiting Australia for pleasure or business, which may take the form of travellers' cheques, letters of credit, etc. Includes expenditure in Australia of foreign students studying under the Colombo Plan; and earnings of Australian domestic airlines for the carriage of overseas visitors over Australian domestic air routes.

*Item 13d. Government transactions.* Receipts for services rendered by the Australian Government to other governments and international organisations, and other payments in Australia by foreign governments on defence and other projects, on diplomatic, consular and trade representation, and for pensions paid in Australia.

*Item 13e. Other goods and services.* The value of Australian production of gold less net industrial usage, business expenses of overseas firms in Australia, and commissions, brokerage, etc.

*Item 14. Depreciation allowances.* The financial provisions made for depreciation which are deducted to obtain net income. The estimates represent, in the main, amounts allowed under income tax legislation, but include also the estimated depreciation on tenanted and owner-occupied dwellings and provisions made by public enterprises. This item is divided into depreciation allowances of trading enterprises (item 14a) and of financial enterprises (item 14b).

*Item 15. Interest, etc.* Comprises interest, non-dwelling rent and royalties. This item appears in most accounts as receipts and payments of interest, etc., but in some entries the amounts are combined with dividends and overseas profits. The item is shown net of intra-sector receipts and payments. Payment of interest, etc. by public enterprises is included in item 15g. Payment of interest, etc., by trading enterprises (item 15a) includes interest charged on borrowings for the purchase of houses by persons, which is treated as an appropriation from the gross operating surplus of dwellings owned by persons. Non-dwelling rent includes only actual payments and is estimated net of the expenses of the owner of the premises on rates, maintenance, etc., which are treated as working expenses of the enterprises renting the building. Royalties include mining and forestry royalties paid to general government and royalties and fees for use of trade marks, patents, etc., paid overseas.

*Item 16. Direct taxes, fees, fines, etc.* Income tax payable by persons and enterprises and other direct taxes, fees, fines, etc., paid by persons. Income tax payable by trading and financial companies (items 16a and 16b) and persons (item 16c) are amounts payable at rates of taxation applicable in each year. Income tax payable by persons includes the total income tax payable by individuals on all forms of income whether wages, business income or property income. The difference between the amounts of income tax payable and the cash receipts by general government (item 16e) is included in item 16f. Other direct taxes, fees, fines, etc., (item 16d) includes estate and gift duties paid and all other taxes, fees for services of a regulatory character, fines and gifts paid by persons to general government.

*Item 17. Dividends.* All receipts and payments of dividends, including dividends payable overseas and the remitted profits of Australian branches of overseas enterprises. Dividends payable (items 17a and 17c) are dividends declared by trading and financial companies in respect of the year. Receipts of dividends (other than dividends receivable from overseas subsidiaries) are cash receipts, and the difference between the amounts payable and received is included in item 17h. The items are shown net of intra-sector receipts and payments.

*Item 18. Undistributed income.* The undistributed income of companies comprising trading enterprises (item 18a) and financial enterprises (item 18c) is the balance of total company income, including profits receivable from overseas (items 18b and 18d) after deduction of income tax and dividends payable, and is equal to the sum of undistributed income accruing to overseas residents (item 18f) and undistributed company income accruing to residents (item 18g). Profits receivable from overseas is the unremitted part of profits earned by overseas branches of Australian companies and undistributed profits of overseas subsidiaries of Australian companies. Undistributed income accruing to residents (item 18g) is estimated as a balancing item and includes the net effect of any errors or inconsistencies in the estimation of company income and appropriations thereof, including undistributed income accruing to overseas residents.

*Item 19. Unincorporated enterprises income.* The gross operating surplus of unincorporated enterprises less depreciation allowances and interest, etc., paid. It comprises the income of farm unincorporated enterprises (item 19a) and the income of all other unincorporated enterprises (item 19b).

*Item 20. Personal income from dwelling rent.* The gross operating surplus of dwellings owned by persons less depreciation allowances and interest, etc., paid.



*Item 21. Public enterprises income.* Includes income of public trading enterprises (item 21a) and income of public financial enterprises (item 21b). For trading enterprises it is equal to gross operating surplus after the deduction of depreciation allowances; for financial enterprises it is the net income after depreciation allowances, interest paid, and net current expenditure on goods and services by government banks are deducted from total receipts of interest and non-dwelling rent. Depreciation allowances deducted in arriving at the income of public trading enterprises are those shown in their published accounts, except in the case of enterprises whose accounts are included in the Commonwealth or State budgets and are analysed on the basis of their cash accounts (in which depreciation is not charged).

*Item 22. Retained investment income of life insurance funds, etc.* Total dividends, interest, etc., received by life insurance and superannuation funds, less rent and interest paid, depreciation allowances, income tax and dividends payable.

*Item 23. Overseas transfers.* All transfers to or from overseas on public authority or private account which are not payments for goods and services or payments of dividends, interest, etc.

*Item 23a. Personal transfers overseas.* Gifts of money by resident persons and private institutions, payments for sustenance, and transfers of emigrants' funds and legacies from Australia to overseas, together with the value of goods exported as gifts.

*Item 23b. Personal transfers from overseas.* Gifts of money received from non-resident persons and private institutions, receipts for sustenance, and transfers of immigrants' funds and legacies from overseas to Australia, together with the value of goods imported as gifts.

*Item 23c. General government transfers overseas.* Grants to, and payments made on behalf of Papua New Guinea, and expenditure overseas in respect of technical assistance and relief under the Colombo Plan and United Nations projects. Includes contributions to United Nations and other international organisations due by virtue of membership of these organisations.

*Item 24. Personal saving.* The excess of personal income over the sum of personal consumption expenditure, interest paid, direct taxes (payable) on income, other direct taxes, fees, fines, etc., and transfers overseas. Personal saving is estimated as the balancing item in the personal current account. It includes saving through life insurance and superannuation funds (defined as premiums, etc. paid less claims, etc. received and administrative expenses of life insurance offices) and the increase in assets of marketing authorities. Personal saving may also take the form of increases in holdings of cash and net purchases of securities, the net increase in bank deposits less advances, the reduction in the outstanding advances of instalment credit companies to persons and unincorporated enterprises, and the increase in the equity of persons in dwellings and in capital equipment, buildings and stocks of unincorporated enterprises.

*Item 25. Cash benefits.* Current transfers to persons from general government in return for which no services are rendered or goods supplied. Principal components are scholarships; hospital, medical, pharmaceutical, maternity, sickness and unemployment benefits; child endowment; widows', age, invalid and repatriation pensions; and attendance money for waterside workers.

*Item 26. Grants for private capital purposes.* Grants to meet part of the costs of private capital expenditure, e.g. Commonwealth Home Savings grants, grants towards construction of science laboratories and libraries in private schools and of houses for aged persons, payments under the Currency Act in relation to the conversion of accounting and other machines following introduction of decimal currency; and compensation to primary industry marketing authorities for losses on overseas debts resulting from sterling devaluation.

*Item 27. Surplus on general government current account.* The excess of current revenue, including income of public enterprises, over current outlay. Current outlay includes current expenditure on goods and services, as defined in item 7, and transfer payments (interest, cash benefits, subsidies, grants for private capital purposes, and transfers overseas). The surplus is transferred to the public authorities capital account where it is shown as part of total funds available for financing capital outlay.

*Item 28. Overseas balance on current account.* The excess of payments to the rest of the world on current account over receipts from the rest of the world on current account. In the national capital account it is shown divided into drawings on Australia's overseas monetary reserves (item 28a) and net apparent capital inflow (item 28b).





## CHAPTER 17

### PRIVATE FINANCE

Further information on the subjects dealt with in this chapter is contained in the annual bulletins *Banking and Currency* (5.1) and *Insurance and Other Private Finance* (5.15). Current information is contained in the *Quarterly Summary of Australian Statistics* (1.3), the *Monthly Review of Business Statistics* (1.4), the *Digest of Current Economic Statistics* (1.5) (monthly), and the following mimeographed statements: monthly—*Banking Statistics* (5.2); *Major Trading Banks Statistics* (preliminary statement) (5.3); *Savings Bank Statistics* (preliminary statement) (5.28); *Savings Banks Housing Finance Transactions within Australia* (preliminary statement) (5.35); *Life Insurance Statistics* (5.17); *Finance Companies* (5.14); *Instalment Credit for Retail Sales* (preliminary statement) (5.19); *Permanent Building Societies* (5.34); quarterly—*Instalment Credit for Retail Sales* (5.18); *New Capital Raisings by Companies in Australia* (bulletin (5.9) and preliminary statement (5.10)); *Capital and Maintenance Expenditure by Private Business in Australia* (5.8) (5.7); *Unit Trusts, Land Trusts and Mutual Funds* (5.31). Other relevant annual mimeographed bulletins are *Life Insurance* (5.32); *Australian Fire, Marine and General Insurance Statistics* (5.16); *Government Pension and Superannuation Schemes* (5.23); *Survey of Selected Private Pension Funds* (5.25); *Finance Companies* (5.13); and *Building Societies: Australia* (5.5).

### MONEY

#### Currency

Australia has a decimal system of currency, the unit being the dollar which is divided into 100 cents. Decimal coins and notes became legal tender on the 14 February 1966. Before that date the Australian currency unit was the pound divided into 20 shillings each of 12 pence. One dollar in the present currency is equal to 10 shillings in the old currency. The par value of the Australian dollar under the terms of the International Monetary Fund and established on the 14 February 1966, is 0.99531 grams of gold.

The *Reserve Bank Act* 1965 authorised the Reserve Bank of Australia to issue Australian notes in denominations of \$1, \$2, \$5, \$10, \$20, or \$50, or in any other denomination that the Treasurer, by instrument of writing published in the Gazette, determines. All Australia's coin requirements are met by the Royal Australian Mint, Canberra.

For additional information on note issue and coinage refer to List of Special Articles, etc., at end of this Year Book.

**AUSTRALIAN NOTES IN CIRCULATION, JUNE 1967 TO 1971**  
(**\$'000**)

		<i>Last Wednesday in June—</i>				
		1967	1968	1969	1970	1971
\$1 and 10s	. . .	33,214	34,881	37,528	40,400	42,218
\$2 and £1	. . .	127,997	117,929	117,281	118,500	119,284
\$5	. . .	42,829	57,444	64,088	73,307	81,373
\$10 and £5	. . .	389,201	401,079	441,276	474,004	521,061
\$20 and £10	. . .	344,943	394,667	447,245	509,271	605,383
£20	. . .	1	1	1	1	..
£50	. . .	43	42	42	41	38
£100	. . .	40	40	40	37	31
<b>Total</b>	. . .	<b>938,269</b>	<b>1,006,083</b>	<b>1,107,500</b>	<b>1,215,561</b>	<b>1,369,388</b>
<i>Held by banks</i>	. . .	<i>162,006</i>	<i>159,726</i>	<i>164,867</i>	<i>165,202</i>	<i>177,706</i>
<i>Held by public</i>	. . .	<i>776,263</i>	<i>846,357</i>	<i>942,632</i>	<i>1,050,359</i>	<i>1,191,682</i>

AUSTRALIAN DECIMAL COIN: COSTS OF COIN ISSUED, 1967-68 TO 1970-71  
(\$'000)

	<i>Cost of metal</i>	<i>Cost of minting</i>	<i>Freight and sundry charges</i>	<i>Total cost</i>	<i>Face value of coin issued</i>	<i>Surplus</i>
Silver—						
1967-68 . . .	1,350	80	2	1,432	1,671	239
1968-69 . . .	..	..	..	..	..	..
1969-70 . . .	..	..	..	..	..	..
1970-71 . . .	..	..	..	..	..	..
Cupro-nickel—						
1967-68 . . .	1,341	1,732	43	3,116	20,243	17,127
1968-69 . . .	1,044	1,320	72	2,436	13,008	10,572
1969-70 . . .	1,226	1,297	68	2,591	19,412	16,821
1970-71 . . .	974	960	65	1,999	15,050	13,051
Bronze—						
1967-68 . . .	407	589	36	1,032	1,823	791
1968-69 . . .	511	745	24	1,280	2,296	1,016
1969-70 . . .	574	675	28	1,277	2,000	723
1970-71 . . .	703	675	36	1,414	2,068	654
Total—						
1967-68 . . .	3,098	2,401	81	5,580	23,737	18,157
1968-69 . . .	1,555	2,065	96	3,716	15,304	11,588
1969-70 . . .	1,800	1,972	96	3,868	21,412	17,544
1970-71 . . .	1,677	1,635	101	3,413	17,118	13,705

AUSTRALIAN DECIMAL COIN: VALUE OF COIN ISSUED  
30 JUNE 1967 TO 1971  
(\$'000)

<i>Year ended 30 June—</i>	<i>50 cents</i>	<i>20 cents</i>	<i>10 cents</i>	<i>5 cents</i>	<i>2 cents</i>	<i>1 cent</i>	<i>Total</i>
1967 . . . . .	4,869	10,420	1,073	2,913	2,043	671	21,989
1968 . . . . .	1,671	11,206	6,099	2,938	1,118	705	23,737
1969 . . . . .	..	6,307	3,854	2,847	1,390	906	15,304
1970 . . . . .	9,038	5,053	3,074	2,247	1,121	879	21,412
1971 . . . . .	7,420	3,640	2,090	1,900	1,150	919	17,119

### Gold receipts, issues and price

Since early in the 1939-45 War all gold has been acquired by the Reserve Bank, and the export and use of gold has been subject to regulation by the Commonwealth Government. All trading banks in Australia, the Deputy Master of the branch of the Royal Mint in Perth, and three private refining companies are authorised under the Banking (Gold) Regulations to deal in gold on behalf of the Reserve Bank. The Melbourne Mint ceased to deal in gold in 1964. The Royal Australian Mint at Canberra is not authorised to receive and issue gold.

The average price of gold in Australia is fixed by the Reserve Bank and at present reflects the parity value of Australian currency established in conformity with the *International Monetary Agreements Act 1947*. The average price paid for gold delivered to the Reserve Bank of Australia or to persons authorised by the Bank to purchase gold is fixed by the Reserve Bank of Australia, and has been \$31.25 per fine ounce since 1 May 1954.

In December 1951 arrangements were made whereby producers could sell a proportion of newly-mined gold for industrial purposes on overseas premium markets. Under these arrangements gold is acquired by the Reserve Bank in the usual manner and sold, at the Bank's buying price, to an association representing gold producers participating in the scheme. The association pays the Bank's handling charges and the costs of preparation of the gold and makes arrangements for export and sale. Profits earned by the association after meeting administrative expenses are distributed to members in proportion to the quantity of gold delivered to the Reserve Bank. Until August 1952, when permission was given for the export of fine gold, gold exported under this arrangement was not to exceed a fineness of 22 carats (11/12ths).

The average price per fine ounce in Australian currency obtained for gold exported under this scheme for each month during the year 1970-71 was \$33.226.

## Overseas exchange rates

In the following table the "par of exchange" rate is the rate as at 30 June 1971 established under the International Monetary Fund Agreement. Selling rates shown are mainly the averages of daily quotations by the Commonwealth Trading Bank of Australia, and in other cases are the rates used by the Department of Customs and Excise in converting import values to Australian dollars for purposes of calculating customs duty.

## OVERSEAS EXCHANGE RATES: PAR OF EXCHANGE AND AVERAGE TELEGRAPHIC TRANSFER SELLING RATES FOR SYDNEY ON OVERSEAS COUNTRIES, 1970-71

Country	Basis of quotation	Australian decimal currency equivalents		Country	Basis of quotation	Australian decimal currency equivalents	
		Par of exchange	Selling rate 1970-71			Par of exchange	Selling rate 1970-71
America, United States of	Dollars to \$A1	1.1200	1.1152	Japan	Yen to \$A1	403.20	397.36
Austria	Schillings to \$A1	29.1200	28.55	Netherlands	Guilders to \$A1	(a)	3.990
Belgium	Francs to \$A1	56.00	55.11	New Zealand	\$A to \$NZ1	1.00	1.0020
Canada	Dollars to \$A1	(a)	1.1326	Norway	Kroner to \$A1	8.000	7.92
Ceylon	Rupees to \$A1	6.667	6.586	Noumea	Francs to \$A1	(b)	109.00
China (mainland)	New Yuan to \$A1	(b)	2.72	Pakistan	Rupees to \$A1	5.333	5.285
China (Taiwan)	Dollars to \$A1	(c)	44.62	Philippines	Pesos to \$A1	4.368	7.024
Denmark	Kroner to \$A1	8.40	8.32	Singapore	Dollars to \$A1	3.429	3.409
Fiji	\$A to \$F1	(b)	1.0288	South Africa, Republic of	Rands to \$A1	0.800	0.7950
France	Francs to \$A1	6.2207	6.133	Spain	Pesetas to \$A1	78.400	77.27
Germany, Fed.	Deutsche Marks			Sweden	Kronor to \$A1	5.794	5.746
Rep. of	to \$A1	4.099	4.017	Switzerland	Francs to \$A1	(b)	4.755
Greece	Drachmae to \$A1	33.589	32.95	United Arab Republic	£E to \$A1	0.390	0.470
Hong Kong	Dollars to \$A1	(b)	6.740	United Kingdom	\$A to £stg1	2.143	2.1514
India	Rupees to \$A1	8.400	8.330	U.S.S.R.	Roubles to \$A1	(b)	1.006
Italy	Lire to \$A1	700.00	694.00				

(a) Exchange rate allowed to fluctuate, no par value fixed.  
(c) No par value established.

(b) Not a member of the International Monetary Fund.

## Volume of money

The statistics of volume of money compiled by the Reserve Bank of Australia include notes and coin in the hands of the public, deposits of the public with trading banks and deposits with all savings banks. As far as possible, all components of this series in the table below have been calculated on a weekly average basis. Deposits of the public with trading banks comprise the actual weekly average of current and fixed deposits with trading banks less both the actual weekly average of Commonwealth and State Government current and fixed deposits and a weekly average of inter-bank current and fixed deposits. Inter-bank deposits mainly comprise savings bank deposits with trading banks and deposits of overseas banks with trading banks in Australia. Certificates of deposit include any holdings by Commonwealth and State Governments and banks. Deposits of the public with trading banks also include the actual weekly average of deposits of the public with the Reserve Bank of Australia. Deposits with all savings banks comprise an interpolated "weekly average" based on end-of-month figures of total deposits with all savings banks. The figures for the volume of money include details for Papua New Guinea and Australia's other external territories.

## VOLUME OF MONEY: AUSTRALIA, JUNE 1967 TO 1971

(Source: Reserve Bank of Australia)

(£ million)

Average of weekly figures for June—	Notes and coin in hands of public	Deposits of public with all trading banks(a)			Deposits with all savings banks(b)	Total volume of money
		Current	Fixed	Certificates of deposits		
1967	882	3,192	2,026	..	5,724	11,824
1968	964	3,450	2,191	..	6,200	12,805
1969	1,065	3,685	2,404	138	6,682	13,974
1970	1,187	3,798	2,617	145	7,090	14,837
1971	1,336	3,976	2,864	56	7,618	15,851

(a) Current and fixed deposits exclude Commonwealth and State Government and inter-bank deposits but include deposits of the public with the Reserve Bank; certificates of deposit include any holdings by Commonwealth and State Governments and banks. (b) Interpolated "Weekly average" based on end-of-month figures.



## BANKING

The Australian banking system has developed along the lines of the United Kingdom system with widespread branch banking conducted by relatively few banks.

### Development since federation

With federation in 1901 the new Commonwealth Parliament was given power, under Section 51 of the Commonwealth Constitution, to legislate with respect to 'Banking, other than State Banking, also State Banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money'. In 1911 the Commonwealth entered the field of banking with the establishment of the Commonwealth Bank of Australia, which conducted both trading bank and savings bank operations. A separate Commonwealth Savings Bank was established in 1928.

### Central bank

Central banking functions of the Commonwealth Bank developed gradually over the years prior to and during the second world war. In November 1935 a Royal Commission was appointed by the Commonwealth Government to inquire into the monetary and banking systems in operation in Australia and to report whether any, and if so what, alterations were desirable in the interests of the people of Australia as a whole, and the manner in which any such alterations should be effected. The Commission presented its report in July 1937, and a summary of the recommendations appears in Year Book No. 31, page 1010.

In 1945 the Commonwealth Government legislated to give full legal effect to the central banking functions already being exercised by the Commonwealth Bank of Australia and to regulate the banking system as a whole. The Commonwealth Bank of Australia further developed mainly as a central bank when from 3 December 1953 the Commonwealth Trading Bank of Australia was established to take over most of the general trading bank functions of the Commonwealth Bank of Australia.

Legislation in 1959 completed the separation of the trading and central banking functions of the Commonwealth Bank of Australia with the establishment of the Commonwealth Development Bank of Australia under the *Commonwealth Banks Act* 1959 to take over the Industrial Finance Department and Mortgage Bank Department of the Commonwealth Bank of Australia.

A new bank, the Reserve Bank of Australia, was established under the *Reserve Bank Act* 1959 as the nation's central bank to administer the provisions of a new banking Act (*Banking Act* 1959). A statutory corporation, the Commonwealth Banking Corporation, was set up under the *Commonwealth Banks Act* 1959 to control the Commonwealth Trading Bank of Australia, the Commonwealth Development Bank of Australia, and the Commonwealth Savings Bank of Australia.

### Trading banks

Commercial banking in Australia is carried on by fourteen trading banks. Six large private trading banks together with the Commonwealth Trading Bank are generally referred to as the major trading banks. These banks provide widespread banking facilities throughout Australia. The remaining seven banks comprise one small local bank, three overseas banks which have been represented in Australia for many years and three State-owned banks operating only within their respective States.

The major trading banks are as follows: Commonwealth Trading Bank of Australia, Australia and New Zealand Banking Group, The Bank of Adelaide, Bank of New South Wales, The Commercial Bank of Australia Ltd, The Commercial Banking Company of Sydney Ltd, and The National Bank of Australasia Ltd.

The other trading banks are: Bank of Queensland Ltd, Bank of China, Bank of New Zealand, Banque Nationale de Paris, The Rural Bank of New South Wales, State Bank of South Australia, and The Rural and Industries Bank of Western Australia (Rural Department).

### Term Loan Fund

Lending by trading banks is generally conducted on an overdraft basis. A departure from this practice followed discussions during 1961-62 involving the Commonwealth Government, the Reserve Bank and the major trading banks, which resulted in arrangements whereby the banks agreed to create a fund known as the Term Loan Fund, the resources of which would be employed to make loans for capital expenditure on production in the rural, industrial and (to a lesser extent) commercial fields and to finance exports. The loans would be made for fixed terms, varying usually between three and eight years. The term lending arrangements operated from April 1962.

### *Farm Development Loan Fund*

Discussions in March 1966 between the Commonwealth Government, the Reserve Bank and the major trading banks resulted in the establishment of a fund known as the Farm Development Loan Fund, from which resources would be available to provide rural producers, particularly smaller producers, with greater access to medium and long-term finance. The Fund was established in April 1966.

### **Savings banks**

Prior to 1956 savings banks operations were conducted by the Commonwealth Savings Bank, two trustee savings banks in Tasmania, and State-owned banks in Victoria, South Australia and Western Australia. In January 1956 private savings banks were established as subsidiary companies by two of the private trading banks. By mid-1962 all the major private trading banks had established savings bank subsidiary companies. In May 1972 the Bank of New Zealand Savings Bank Limited was granted an authority to carry on savings bank business in Australia.

### **Development banks**

The Commonwealth Development Bank of Australia was established by the *Commonwealth Banks Act* 1959 and commenced operations on 14 January 1960. The Australian Resources Development Bank was established by the major trading banks with the support of the Reserve Bank of Australia and commenced operations in February 1968. For further information on these banks see pages 502–3.

### **Current legislation**

Operations of banks and banking in Australia are currently governed by (i) Commonwealth legislation enacted in 1959 in respect of banking other than State banking, and (ii) State legislation relating to the incorporation of banks and management of State banks.

#### *Commonwealth banking legislation*

(a) The *Banking Act* 1959–1967 applies to all banks operating in Australia including the external Territories of the Commonwealth except State banks trading in their own State. The objects of the Act are: (i) to provide a legal framework uniform throughout Australia for regulating the banking system; (ii) to safeguard depositors of the banks from loss; (iii) to provide for the co-ordination of banking policy under the direction of the Reserve Bank; (iv) to control the volume of credit in circulation and bank interest rates; (v) to mobilise and to provide machinery for the control of the foreign exchange and gold resources of the Australian economy. A summary of the main provisions of the *Banking Act* 1959 is given in Year Book No. 46, pages 759–60.

(b) The *Reserve Bank Act* 1959–1966 provides for the constitution and management of the Reserve Bank of Australia and the management of the Australian note issue.

(c) The *Commonwealth Banks Act* 1959–1968 provides for the constitution and management of the Commonwealth Banking Corporation, Commonwealth Trading Bank of Australia, Commonwealth Savings Bank of Australia, and Commonwealth Development Bank of Australia.

The Commonwealth Banking Corporation is the controlling body for the Commonwealth Trading Bank, Commonwealth Savings Bank and Commonwealth Development Bank. Under the *Banking Act* 1959–1967 the Corporation and its constituent banks are subject to the same central banking controls as are the private trading banks.

#### *State Banking legislation*

The State Acts under which the various banks are incorporated differ. While some of the older banks were incorporated by special Act or Charter, e.g. the Bank of New South Wales by Act of Council 1817, the Bank of Adelaide by Act of the South Australian Parliament, and the Bank of New Zealand by Act of the General Assembly of New Zealand, most of the banks are incorporated under a companies Act of the States or the United Kingdom. This is also the case with those banks which were reconstructed after the financial crisis of 1893. State banks, constituted under State Acts, transacting general banking business are The Rural Bank of New South Wales, the State Bank of South Australia, and the Rural and Industries Bank of Western Australia. State savings banks, constituted under State Acts, transacting savings bank business are The State Savings Bank of Victoria, The Savings Bank of South Australia and the Savings Bank Division of the Rural and Industries Bank of Western Australia.

## Reserve Bank of Australia

The Reserve Bank of Australia preserved and continued in existence the original corporate body known as the Commonwealth Bank of Australia under the new name Reserve Bank of Australia. An account of the progress and development of that bank is given in earlier issues of the Year Book (see No. 37, pages 570-2, and No. 45, pages 735-7).

The general functions of the Reserve Bank are set out in Section 10 of the *Reserve Bank Act* 1959-1966, which states:

'It is the duty of the Board, within the limits of its powers, to ensure that the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia and that the powers of the Bank under this Act, the *Banking Act* 1959, and regulations under that Act are exercised in such a manner as, in the opinion of the Board, will best contribute to,

(a) the stability of the currency of Australia; (b) the maintenance of full employment in Australia; and (c) the economic prosperity and welfare of the people of Australia.'

In addition to its functions as a central bank, the Bank controls the Australian note issue through a Note Issue Department, provides special banking facilities through the Rural Credits Department, and acts as banker to the Commonwealth and some of the States.

### Management

The policy of the Reserve Bank is determined by a Board consisting of the Governor (Chairman), the Deputy Governor, the Secretary to the Treasury, and seven other members appointed by the Governor-General. The Bank is managed by the Governor, who acts in accordance with the policy of the Board and with any directions of the Board. The Bank is required to inform the Government of the monetary and banking policy of the Board. In the event of a disagreement between the Government and the Board as to whether the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia, the Governor-General, acting with the advice of the Executive Council, may determine the policy to be adopted by the Bank.

### Central banking business

Under the *Commonwealth Bank Act* 1911-1943 and the war-time powers conferred by the National Security Regulations the Commonwealth Bank gradually assumed the functions of a Central Bank. Part III of the *Commonwealth Bank Act* 1945 formally constituted the Bank as a Central Bank and granted the necessary powers to carry on the business of a Central Bank, these powers being carried through into the present Act constituting the Reserve Bank. Under the provisions of the *Reserve Bank Act* 1959-1966 the capital for the Central Banking Business is the capital of the Commonwealth Bank for Central Banking purposes immediately prior to 14 January 1960, and such other sums as are transferred from the Reserve Bank Reserve Fund. The profits of the Bank are distributed as follows: (a) such sums as the Treasurer, after consultation with the Bank, determines shall be placed to the credit of the Reserve Bank Reserve Fund and (b) the remainder shall be paid to the Commonwealth.

### Note Issue Department

The Note Issue Department, established in 1920 when the control of the Australian note issue was transferred from the Commonwealth Treasury to the Commonwealth Bank, was maintained in the same form under the *Reserve Bank Act* 1959. The Reserve Bank may, through this Department, issue, re-issue and cancel Australian notes. Under the *Reserve Bank Act* 1959-1966 the profits of the Note Issue Department are paid to the Commonwealth.

### Rural Credits Department

The Rural Credits Department, established in 1925 for the purpose of making short-term credit available for the orderly marketing of primary produce, was continued in the same form under the *Reserve Bank Act* 1959. The Reserve Bank may, through this Department, make advances upon the security of primary produce placed under the legal control of the Bank, or other security associated with the production or marketing of primary produce, to co-operative associations or marketing boards formed under the laws of the Commonwealth or a State or Territory of the Commonwealth or other bodies specified by proclamation. The period of the advance shall not exceed one year. Under the provisions of the *Reserve Bank Act* 1959-1966 the capital of the Rural Credits Department is the capital of the Rural Credits Department of the Commonwealth Bank immediately prior to 14 January 1960, and \$4,000,000 provided by the Reserve Bank. The profits of the Rural Credits Department are dealt with as follows: (a) one-half to the credit of the Rural Credits Department Reserve Fund and (b) one-half to the credit of the Rural Credits Development Fund.



**RESERVE BANK OF AUSTRALIA: LIABILITIES, 30 JUNE 1967 TO 1971**  
(\$ million)

30 June—	Capital and reserve funds	Development fund	Special reserve— I.M.F. special drawing rights	Australian notes on issue	Deposits of trading banks Statutory reserve deposit accounts	Other	Deposits of savings banks	Other deposits, bills payable and other liabilities	Total
<b>CENTRAL BANKING BUSINESS</b>									
1967 .	68.8	..	..	..	473.8	98.9	492.5	355.3	1,489.3
1968 .	60.1	..	..	..	456.4	117.9	495.8	327.6	1,457.8
1969 .	63.0	..	..	..	565.6	60.4	535.2	658.0	1,882.1
1970 .	66.7	..	75.0	..	674.5	39.5	613.2	672.2	2,141.2
1971 .	70.7	..	138.6	..	617.5	62.8	615.5	1,098.9	2,603.9
<b>NOTE ISSUE DEPARTMENT</b>									
1967 .	(a)9.5	..	..	930.1	..	..	..	22.1	961.7
1968 .	..	..	..	998.5	..	..	..	20.3	1,018.8
1969 .	..	..	..	1,091.5	..	..	..	45.9	1,137.4
1970 .	..	..	..	1,195.8	..	..	..	62.5	1,258.3
1971 .	..	..	..	1,369.4	..	..	..	74.2	1,443.6
<b>RURAL CREDITS DEPARTMENT</b>									
1967 .	16.0	0.7	..	..	..	..	..	344.2	361.0
1968 .	16.7	0.8	..	..	..	..	..	212.0	229.6
1969 .	17.6	0.9	..	..	..	..	..	461.8	480.3
1970 .	18.5	1.1	..	..	..	..	..	338.5	358.1
1971 .	19.3	1.1	..	..	..	..	..	288.3	308.7
<b>TOTAL</b>									
1967 .	94.3	0.7	..	930.1	473.8	98.9	492.5	(b)393.6	(b)2,483.9
1968 .	76.9	0.8	..	998.5	456.4	117.9	495.8	(b)315.9	(b)2,462.2
1969 .	80.6	0.9	..	1,091.5	565.6	60.4	535.2	(b)420.8	(b)2,754.9
1970 .	85.2	1.1	75.0	1,195.8	674.5	39.5	613.2	(b)478.7	(b)3,162.9
1971 .	90.0	1.1	138.6	1,369.4	617.5	62.8	615.5	(b)765.8	(b)3,660.6

(a) Special reserve premium on gold sold.

(b) Inter-departmental accounts have been offset.

**RESERVE BANK OF AUSTRALIA: ASSETS, 30 JUNE 1967 TO 1971**  
(\$ million)

30 June—	Gold and balances held abroad (a)	Other overseas securities	Australian notes, coin	Australian Government securities (b)	Cheques and bills of other banks	Loans, advances, bills discounted, all other assets (c)	Bank premises (d)	Bills receivable and remittances in transit	Total
<b>CENTRAL BANKING BUSINESS</b>									
1967 .	396.9	168.8	12.4	420.6	9.2	396.1	30.9	54.3	1,489.3
1968 .	349.3	182.0	9.5	536.2	8.0	263.7	33.8	75.3	1,457.8
1969 .	589.1	231.6	8.4	386.0	10.8	570.1	35.0	51.1	1,882.1
1970 .	758.8	201.5	12.6	573.9	8.0	469.0	36.3	81.1	2,141.2
1971 .	1,285.0	285.0	11.4	453.1	3.4	392.7	37.9	135.4	2,603.9
<b>NOTE ISSUE DEPARTMENT</b>									
1967 .	394.5	174.8	..	391.7	..	0.5	0.2	..	961.7
1968 .	315.5	151.4	..	501.0	..	(e)50.8	0.2	..	1,018.8
1969 .	164.5	198.5	..	457.3	..	(e)316.8	0.3	..	1,137.4
1970 .	189.9	168.0	..	606.1	..	(e)294.0	0.4	..	1,258.3
1971 .	289.0	257.1	..	447.7	..	(e)449.2	0.6	..	1,443.6
<b>RURAL CREDITS DEPARTMENT</b>									
1967 .	..	..	..	..	..	361.0	..	..	361.0
1968 .	..	..	..	..	..	229.6	..	..	229.6
1969 .	..	..	..	..	..	480.3	..	..	480.3
1970 .	..	..	..	..	..	358.1	..	..	358.1
1971 .	..	..	..	..	..	308.7	..	..	308.7
<b>TOTAL(f)</b>									
1967 .	791.4	343.6	12.4	812.4	9.2	429.5	31.0	54.3	2,483.9
1968 .	664.8	333.5	9.5	1,037.2	8.0	300.1	34.0	75.3	2,462.2
1969 .	753.5	430.1	8.4	843.3	10.8	622.4	35.3	51.1	2,754.9
1970 .	948.7	369.5	12.6	1,180.0	8.0	526.4	36.7	81.1	3,162.9
1971 .	1,574.0	542.1	11.4	900.7	3.4	455.1	38.6	135.4	3,660.6

(a) Includes currency at short call and International Monetary Fund drawing rights. (b) Includes Treasury bills and Treasury notes. (c) After deducting provision for debts considered bad or doubtful. (d) At cost, less amounts written off. (e) Includes interest-bearing deposit account established with the Central Bank. (f) Inter-departmental accounts have been offset.

**RESERVE BANK OF AUSTRALIA: NET PROFITS, 1966-67 TO 1970-71**  
(\$ million)

	Central Banking Business	Note Issue Department	Rural Credits Department	Total	Distributed to—			
					Common- wealth of Australia	Reserve Bank Reserve fund	Rural Credits Department	
							Reserve fund	Develop- ment fund
1966-67	7.9	34.3	1.3	43.6	38.8	3.5	0.7	0.7
1967-68	4.4	23.0	1.5	29.0	26.2	1.3	0.7	0.7
1968-69	5.7	23.8	1.6	31.1	26.6	2.9	0.8	0.8
1969-70	8.9	36.3	1.9	47.1	41.6	3.6	0.9	0.9
1970-71	11.3	46.9	1.6	59.8	54.2	4.0	0.8	0.8

### Trading banks

Balance sheet information contained in the table on page 493 and profit and loss account information contained in the table at the top of page 494 for the years 1967 to 1971 does not relate to uniform accounting periods but rather to the financial years of the banks which ended in the years shown. For balance dates of individual banks see annual bulletin *Banking and Currency* (5.1).

Figures shown for averages of liabilities and assets in the table on page 494 are the average of liabilities and assets within Australia (including Papua New Guinea and other External Territories) of the banks on the weekly balance days (Wednesdays) during the period concerned. In the table on page 495 figures shown for debits to customers' accounts are the average of debits for the weeks ending on the weekly balance days (Wednesdays) during the period concerned. In the table on page 496 figures shown for new and increased lending commitments are the averages of weekly commitments for the six months ending on the second Wednesday of the last month in the period under review.

In the classification of bank advances, borrowers are classified into two main groups.

*Resident borrowers* comprising all institutions (including branches of overseas institutions) engaged in business in Australia and individuals permanently residing in Australia, and

*Non-resident borrowers* comprising all other persons and institutions, including companies incorporated abroad, which, although represented, do not carry on business in Australia.

Advances to resident borrowers are classified into.

*Business advances* which are advances to partnerships, companies and other institutions engaged in business in Australia, advances to individuals actively engaged in business or a profession on their own behalf if the advances are mainly for purposes of that business or profession, and advances to mutual, co-operative and benefit societies which distribute their profits to members by way of dividends, rebates of charges for goods and services, or increased benefits.

Separate figures are shown for business advances to companies and to other (unincorporated) businesses and advances are also classified to the main industry of borrower.

*Advances to public authorities* which are advances to local and semi-government authorities including separately constituted government business undertakings but not Commonwealth and State governments.

*Personal advances* which are advances to individuals for purposes other than carrying on a business or profession.

*Advances to non-profit organisations* which are advances to organisations which are not operated for the purpose of making a profit or gain to individual members, but for the purposes of the organisations or for the benefit of the community in general.

The classification used for overdraft limits is the same as that used for the classification of bank advances (see above) while abridged versions of this classification are used for bank deposits and new and increased lending commitments.

## Interest rates

At 30 June 1971 the maximum rate of interest paid by trading banks for the following terms were: (i) on fixed deposits of less than \$50,000, 3 months and less than 18 months—5.00 per cent, 18 months up to and including 24 months—5.30 per cent, over 24 months and less than 3 years—5.60 per cent, 3 years and less than 4 years—6.00 per cent, 4 years—6.50 per cent; (ii) on fixed deposits of \$50,000 and over, 30 days up to and including 24 months—5.50 per cent, over 24 months and less than 4 years—6.00 per cent, 4 years—6.50 per cent; (iii) on certificates of deposit (\$50,000 and over), 3 months to 24 months—5.50 per cent. The maximum rate of interest charged on overdrafts was 8.25 per cent and the maximum flat rate on unsecured personal loans was 6.50 per cent.

## Branches and agencies

At 30 June 1971 the major trading banks operated 4,509 branches, and the other trading banks 278 branches. Of the total of 4,787 branches, 2,316 were located in 'metropolitan areas'. Trading bank facilities were also available at 1,531 agencies throughout Australia at 30 June 1971.

## Liabilities and assets

## TRADING BANKS(a): LIABILITIES AND ASSETS(b), 1967 TO 1971

(\$ million)

## LIABILITIES

	Paid-up capital	Reserve funds (used in business of bank)	Final dividend proposed	Balance of profit and loss account	Total share-holders' funds or total capital and reserve funds	Balances due to other banks	Deposits, bills payable and other liabilities(c)	Total
1967 . . .	246.1	201.0	9.9	15.6	472.5	221.3	7,459.3	8,153.1
1968 . . .	245.6	217.8	10.4	15.6	489.4	229.6	8,001.1	8,720.1
1969 . . .	269.9	245.7	8.7	22.0	546.1	335.9	8,671.6	9,553.6
1970 . . .	358.6	253.7	12.6	27.3	652.1	460.5	9,295.3	10,407.9
1971 . . .	326.7	273.4	13.3	30.4	643.7	690.8	10,009.0	11,343.6

## ASSETS

	Coin, bullion, notes and cash at Reserve Bank	Money at short call overseas	Australian public securities					Loans to authorised dealers in short-term money market
			Commonwealth Government		Local and semi- government authorities	Other public securities	Other securities	
			Treasury bills and notes	Other securities				
1967 .	203.8	63.5	49.3	1,263.1	32.4	52.2	92.8	102.0
1968 .	206.6	33.0	67.7	1,230.1	37.2	45.0	115.9	121.0
1969 .	250.3	57.4	77.8	1,344.8	38.9	51.9	149.5	158.2
1970 .	252.6	49.6	92.7	1,244.3	47.3	39.3	229.4	132.2
1971 .	220.0	49.7	119.2	1,414.4	50.8	71.6	273.4	155.6

	Statutory reserve deposit account with Reserve Bank	Cheques and bills of, and balances with and due from other banks	Loans(d), advances and bills discounted	Bank premises, furniture and sites	Bills receivable and remittances in transit	All other assets	Total
1967 . . .	472.4	401.6	4,025.8	165.9	1,140.6	87.7	8,153.1
1968 . . .	454.6	456.4	4,515.2	165.9	1,174.1	97.4	8,720.1
1969 . . .	582.7	420.7	5,004.3	185.3	1,137.4	94.4	9,553.6
1970 . . .	632.0	400.4	5,707.6	199.2	1,181.7	199.7	10,407.9
1971 . . .	611.6	511.3	6,179.8	178.5	1,271.8	235.9	11,343.6

(a) Excludes the three overseas banks but includes the deposits and assets held against those deposits of the Savings Banks Division of the Rural and Industries Bank of Western Australia. (b) This table relates to liabilities and assets both inside and outside Australia. (c) Includes provisions for contingencies. (d) Other than loans to authorised dealers in the short-term money market.



**TRADING BANKS(a): PROFIT AND LOSS, APPROPRIATION OF PROFITS(b)**  
**1967 TO 1971**  
(\$ million)

	<i>Profit and loss</i>			<i>Profits appropriated to—</i>				
	<i>Net earnings (c)</i>	<i>Expenses (d)</i>	<i>Income, land and other taxes and payments in lieu of taxes</i>	<i>Net profit</i>	<i>Reserve funds (e)</i>	<i>Writing-off bank premises</i>	<i>Other appropriations</i>	<i>Dividends paid and proposed</i>
1967 . . .	334.7	273.6	28.5	32.6	8.8	2.1	1.2	20.5
1968 . . .	365.3	286.9	37.6	40.9	16.7	2.5	1.7	18.7
1969 . . .	422.2	335.5	41.5	45.2	13.4	1.4	2.5	21.6
1970 . . .	478.9	378.9	43.8	56.3	15.8	1.0	3.1	31.1
1971 . . .	525.6	443.0	36.2	46.3	13.2	1.0	3.2	25.8

(a) Excludes the three overseas banks. (b) Includes profit and loss on account of the Savings Bank Division of the Rural and Industries Bank of Western Australia. (c) Discount and interest earned, net exchange, commissions and other items (including transfers from contingencies accounts) after deducting interest paid and accrued on deposits, rebate on bills current at balance date, amounts written off assets and losses on realisation of assets, and transfers to the credit of contingencies accounts (out of which accounts provision for all bad and doubtful debts has been made). (d) Includes directors' fees. (e) Excludes accumulated profits and profit and loss accounts.

**ALL TRADING BANKS: AVERAGE LIABILITIES AND ASSETS(a) WITHIN AUSTRALIA(b)**  
**JUNE 1967 TO 1971**  
(\$ million)  
**LIABILITIES(c)**

Deposits repayable in Australia					Balances due to other banks	Bills payable and all other liabilities to the public	Total
June	Fixed	Current		Total			
		Bearing interest	Not bearing interest				
1967	.	2,274.8	378.9	2,960.0	39.6	256.1	5,909.4
1968	.	2,472.9	448.6	3,165.5	54.2	284.5	6,425.6
1969	.	2,850.5	467.9	3,387.2	111.5	322.2	7,139.3
1970	.	3,097.2	462.9	3,538.9	257.7	439.4	7,796.0
1971	.	3,176.5	551.2	3,703.5	320.8	526.0	8,278.0

**ASSETS(d)**

<i>June</i>	<i>Coin, bullion, notes and cash at Reserve Bank</i>	<i>Commonwealth Government securities</i>	<i>Local and semi-government securities</i>	<i>Loans to authorised dealers in short-term money market</i>	<i>Statutory reserve deposit account with Reserve Bank</i>	<i>Loans(e), advances and bills discounted</i>	<i>All other assets</i>	<i>Total</i>
1967 . . .	172.3	24.6	1,187.0	19.5	88.8	475.2	3,547.8	5,037.4
1968 . . .	161.4	27.5	1,188.5	20.6	87.7	457.8	4,019.8	5,543.6
1969 . . .	158.5	52.9	1,389.6	20.3	94.9	567.6	4,383.6	6,005.9
1970 . . .	171.9	54.3	1,275.2	23.7	102.8	678.7	4,902.6	6,715.1
1971 . . .	182.0	110.8	1,339.5	25.5	142.0	619.8	5,316.8	7,025.6

(a) Figures shown for average of liabilities and assets are the average of liabilities and assets within Australia of the banks at the close of business on the weekly balance days (usually Wednesdays) during the period concerned. (b) Includes Papua New Guinea and other External Territories. (c) Excludes shareholders' funds, inter-branch accounts and contingencies. (d) Excludes inter-branch accounts and contingencies. (e) Excludes loans to authorised dealers in the short-term money market.

**TRADING BANKS: AVERAGE WEEKLY DEBITS TO CUSTOMERS' ACCOUNTS(a), STATES AND TERRITORIES, 1966-67 TO 1970-71**  
(\$ million)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1966-67	1,080.2	940.0	256.9	184.4	138.6	47.3	4.5	17.0	2,668.9
1967-68	1,257.9	1,041.8	289.2	201.7	169.1	51.3	5.8	21.2	3,038.0
1968-69	1,526.0	1,214.1	325.3	224.2	209.0	55.9	7.4	50.4	3,612.6
1969-70	1,865.6	1,413.3	364.7	243.2	246.4	61.2	12.7	87.7	4,294.9
1970-71	2,148.6	1,647.3	405.0	269.6	295.3	64.2	15.8	64.6	4,910.4

(a) Covers all trading banks and in addition the Rural Credit Department of the Reserve Bank and the Commonwealth Development Bank. Excludes debits to Commonwealth and State Government accounts in capital cities.

**Major Trading Banks: classification of bank advances, deposits, new and increased lending commitments and overdraft limits**

For an explanation of items in the following table see notes on page 492.

**CLASSIFICATION OF TOTAL ADVANCES WITHIN AUSTRALIA(a)**  
**JULY 1970 TO JANUARY 1972**

	<i>At second Wednesday of—</i>							
	<i>July 1970</i>		<i>January 1971</i>		<i>July 1971</i>		<i>January 1972</i>	
	<i>Amount (\$m)</i>	<i>Per cent</i>	<i>Amount (\$m)</i>	<i>Per cent</i>	<i>Amount (\$m)</i>	<i>Per cent</i>	<i>Amount (\$m)</i>	<i>Per cent</i>
<b>Resident borrowers—</b>								
<b>Business advances—</b>								
Agriculture, grazing and dairying	997.8	22.6	978.7	21.9	993.9	20.5	933.9	18.9
Manufacturing	729.0	16.5	693.1	15.5	843.5	17.4	800.0	16.2
Transport, storage and communication	85.7	1.9	87.3	2.0	90.1	1.9	90.2	1.8
<b>Finance—</b>								
Building and housing societies	42.6	1.0	39.8	0.9	42.4	0.9	42.0	0.9
Other	161.8	3.7	205.9	4.6	192.7	4.0	291.2	5.9
<b>Total finance</b>	<b>204.5</b>	<b>4.6</b>	<b>245.7</b>	<b>5.5</b>	<b>235.2</b>	<b>4.9</b>	<b>333.1</b>	<b>6.8</b>
<b>Commerce—</b>								
Retail trade	332.4	7.5	285.4	6.4	331.7	6.9	304.4	6.2
Wholesale trade(b)	358.2	8.1	357.8	8.0	366.1	7.6	412.9	8.4
<b>Total commerce</b>	<b>690.7</b>	<b>15.6</b>	<b>643.2</b>	<b>14.4</b>	<b>697.8</b>	<b>14.4</b>	<b>638.0</b>	<b>12.9</b>
Building and construction	149.2	3.4	134.8	3.0	152.1	3.1	140.0	2.8
Other businesses	617.8	14.0	731.3	16.3	817.1	16.9	898.1	18.2
Unclassified	46.3	1.0	48.2	1.1	51.2	1.1	58.9	1.2
<b>Total business advances of which—</b>	<b>3,521.1</b>	<b>79.8</b>	<b>3,562.3</b>	<b>79.6</b>	<b>3,880.8</b>	<b>80.2</b>	<b>3,892.3</b>	<b>79.0</b>
Companies	2,075.4	47.0	2,179.5	48.7	2,437.2	50.4	2,495.3	50.6
Other	1,445.7	32.8	1,382.8	30.9	1,443.6	29.8	1,397.0	28.2
Advances to public authorities(c)	36.9	0.8	64.1	1.4	62.3	1.3	132.5	2.7
<b>Personal advances classified according to main purpose of advance—</b>								
Building or purchasing own home (individuals)	297.3	6.7	292.2	6.5	294.8	6.1	296.5	6.0
Other (including personal loans)	483.8	11.0	484.9	10.8	527.5	10.9	535.3	10.9
<b>Total personal</b>	<b>781.1</b>	<b>17.7</b>	<b>777.2</b>	<b>17.4</b>	<b>822.3</b>	<b>17.0</b>	<b>831.8</b>	<b>16.9</b>
Advances to non-profit organisations	70.7	1.6	69.5	1.6	69.3	1.4	69.6	1.4
<b>Total advances to resident borrowers</b>	<b>4,409.8</b>	<b>99.9</b>	<b>4,473.0</b>	<b>99.9</b>	<b>4,834.7</b>	<b>99.9</b>	<b>4,926.2</b>	<b>99.9</b>
<b>Advances to non-resident borrowers</b>	<b>4.0</b>	<b>0.1</b>	<b>3.6</b>	<b>0.1</b>	<b>4.2</b>	<b>0.1</b>	<b>5.9</b>	<b>0.1</b>
<b>Total all advances</b>	<b>4,413.8</b>	<b>100.0</b>	<b>4,476.6</b>	<b>100.0</b>	<b>4,839.0</b>	<b>100.0</b>	<b>4,932.1</b>	<b>100.0</b>

(a) Includes Papua New Guinea and semi-government bodies.

(b) Includes temporary advances to woolbuyers.

(c) Includes local government

**MAJOR TRADING BANKS: CLASSIFICATION OF DEPOSITS(a) WITHIN AUSTRALIA(b)  
JULY 1970 TO JANUARY 1972**

	<i>At second Wednesday of—</i>							
	<i>July 1970</i>		<i>January 1971</i>		<i>July 1971</i>		<i>January 1972</i>	
	<i>Amount (\$m)</i>	<i>Per cent</i>	<i>Amount (\$m)</i>	<i>Per cent</i>	<i>Amount (\$m)</i>	<i>Per cent</i>	<i>Amount (\$m)</i>	<i>Per cent</i>
<i>Resident depositors—</i>								
<i>Business deposits—</i>								
Agriculture, grazing and dairying . . . . .	756.2	12.3	795.9	12.2	729.1	11.3	813.7	11.2
Manufacturing . . . . .	359.0	5.8	395.6	6.1	314.7	4.9	415.6	5.7
Transport, storage and communication . . . . .	96.8	1.6	95.4	1.5	96.8	1.5	104.5	1.5
Finance . . . . .	421.0	6.9	442.2	6.8	425.9	6.6	487.7	6.7
Commerce . . . . .	442.1	7.2	530.1	8.2	458.0	7.1	556.4	7.7
Building and construction . . . . .	187.3	3.1	222.3	3.4	205.0	3.2	237.8	3.3
Other businesses . . . . .	844.2	13.7	912.9	14.0	928.7	14.5	992.0	13.7
Unclassified . . . . .	91.2	1.5	71.4	1.1	100.1	1.6	101.0	1.4
<i>Total business deposits</i>	<i>3,197.8</i>	<i>52.1</i>	<i>3,465.8</i>	<i>53.3</i>	<i>3,258.4</i>	<i>50.7</i>	<i>3,708.7</i>	<i>51.2</i>
of which—								
Companies . . . . .	1,469.8	23.9	1,594.6	24.5	1,514.7	23.6	1,794.4	24.8
Other . . . . .	1,728.0	28.2	1,871.2	28.8	1,743.7	27.1	1,914.3	26.4
Deposits of public authorities . . . . .	377.5	6.1	358.9	5.5	405.6	6.3	494.7	6.8
Personal deposits . . . . .	2,161.9	35.2	2,285.3	35.1	2,340.8	36.4	2,587.8	35.7
Deposits of non-profit organisations . . . . .	307.6	5.0	292.4	4.5	318.4	5.0	333.6	4.6
<i>Total resident depositors</i>	<i>6,044.8</i>	<i>98.4</i>	<i>6,402.4</i>	<i>98.4</i>	<i>6,323.2</i>	<i>98.4</i>	<i>7,124.9</i>	<i>98.3</i>
<i>Total non-resident depositors</i>	<i>98.1</i>	<i>1.6</i>	<i>104.4</i>	<i>1.6</i>	<i>102.9</i>	<i>1.6</i>	<i>123.0</i>	<i>1.7</i>
<i>Total all depositors</i>	<i>6,142.9</i>	<i>100.0</i>	<i>6,506.8</i>	<i>100.0</i>	<i>6,426.1</i>	<i>100.0</i>	<i>7,247.8</i>	<i>100.0</i>

(a) Excludes deposits of Commonwealth and State Governments.

(b) Includes Papua New Guinea.

**MAJOR TRADING BANKS: NEW AND INCREASED LENDING COMMITMENTS  
TO SELECTED INDUSTRIAL GROUPS(a), JULY 1970 TO JANUARY 1972**

(Source: Reserve Bank of Australia)

(\$ million)

	<i>Six months ended second Wednesday of—</i>							
	<i>July 1970</i>		<i>January 1971</i>		<i>July 1971</i>		<i>January 1972</i>	
	<i>Aggre- gate</i>	<i>Term loan com- ponent</i>	<i>Aggre- gate</i>	<i>Term loan com- ponent</i>	<i>Aggre- gate</i>	<i>Term loan com- ponent</i>	<i>Aggre- gate</i>	<i>Term loan com- ponent</i>
<i>Business—</i>								
Agriculture, grazing and dairying . . . . .	(b)125.7	14.0	(b)106.1	11.8	(b)108.7	10.7	(b)95.8	11.7
Manufacturing . . . . .	144.3	28.3	151.7	13.4	137.8	40.7	201.2	40.1
Finance . . . . .	26.8	0.3	62.8	0.2	60.5	0.5	29.8	1.0
Commerce(a) . . . . .	123.4	3.0	145.0	8.5	139.6	16.3	161.0	9.1
Building and construction . . . . .	44.4	1.4	64.3	19.5	47.2	3.4	44.7	1.6
<i>Persons—</i>								
Advances for building or purchase of own home (to individuals) . . . . .	88.6	..	90.4	..	97.2	..	105.6	..
Other (including personal loans) . . . . .	163.3	..	165.4	..	176.1	..	190.2	..
All other . . . . .	173.2	30.2	273.2	33.5	257.9	46.5	324.1	71.5
<i>Total</i>	<i>(b)889.7</i>	<i>77.1</i>	<i>(b)1,059.0</i>	<i>86.9</i>	<i>(b)1,025.0</i>	<i>118.0</i>	<i>(b)1,152.5</i>	<i>134.8</i>

(a) Excludes commitments in respect of temporary advances to woolbuyers. (b) Includes Farm Development Loan approvals: July 1970, \$7.5 million; January 1971, \$10.0 million; July 1971, \$15.8 million and January 1972, \$11.6 million.



**MAJOR TRADING BANKS: CLASSIFICATION OF OVERDRAFT LIMITS  
OUTSTANDING(a), JULY 1970 TO JANUARY 1972**

(Source: Reserve Bank of Australia)

(\$ million)

	Second Wednesday of—			
	July 1970	January 1971	July 1971	January 1972
<i>Resident borrowers—</i>				
Business overdraft limits—				
Agriculture, grazing and dairying—				
Mainly sheep grazing . . . . .	402.7	400.4	381.7	352.7
Mainly wheat growing . . . . .	125.7	127.6	122.8	118.0
Mainly dairying and pig raising . . . . .	114.3	105.5	103.8	92.7
Other . . . . .	289.3	299.4	313.3	311.0
Total agriculture, etc. . . . .	932.0	932.8	921.5	874.3
Manufacturing . . . . .	1,229.2	1,255.5	1,256.7	1,329.7
Transport, storage and communication . . . . .	111.3	105.9	107.5	119.8
Finance—				
Building and housing societies . . . . .	66.2	63.7	67.7	64.3
Pastoral finance companies . . . . .	104.7	119.1	147.2	146.3
Hire purchase and other finance companies . . . . .	92.7	83.9	95.0	102.2
Other . . . . .	90.5	92.7	99.2	105.7
Total finance . . . . .	354.1	359.4	409.0	418.4
Commerce(a)—				
Retail trade . . . . .	477.1	473.9	485.6	493.1
Wholesale trade . . . . .	365.5	389.5	399.6	413.9
Total commerce(a) . . . . .	842.6	863.3	885.2	907.0
Building and construction . . . . .	197.9	194.6	196.1	195.9
Other businesses—				
Mining . . . . .	133.0	224.9	212.2	289.2
Other . . . . .	514.5	540.1	593.3	589.3
Total other businesses . . . . .	647.5	765.0	805.5	878.5
Unclassified . . . . .	42.6	47.4	52.8	47.4
Total business overdraft limits . . . . .	4,357.4	4,523.9	4,634.4	4,771.1
Overdraft limits of public authorities . . . . .	173.1	215.4	236.0	267.7
Personal overdraft limits—				
Building or purchasing own home . . . . .	349.3	350.7	347.5	352.8
Other . . . . .	587.0	605.4	641.7	703.3
Total personal overdraft limits . . . . .	936.3	956.0	989.1	1,056.1
Overdraft limits of non-profit organisations . . . . .	124.2	121.2	119.9	121.5
Total overdraft limits of resident borrowers . . . . .	5,591.0	5,816.6	5,979.4	6,216.3
Overdraft limits of non-resident borrowers . . . . .	4.8	6.5	4.7	5.5
Total all overdraft limits . . . . .	5,595.8	5,823.1	5,984.1	6,221.8

(a) Excludes limits in respect of temporary advances to woolbuyers, term loans and farm development loans.

**MAJOR TRADING BANKS: ADVANCES(a), BY RATE OF INTEREST  
JUNE 1970 TO DECEMBER 1971**

(Source: Reserve Bank of Australia)

(Proportion at each rate to total—per cent)

Interest rate per annum	End of—			
	June 1970	December 1970	June 1971	December 1971
5 per cent and less . . . . .	3.1	4.4	3.7	4.9
More than 5 per cent but less than 5½ per cent . . . . .	0.6	0.8	0.6	0.7
5½ per cent . . . . .	0.1	0.2	..	0.5
More than 5½ per cent but less than 6 per cent . . . . .	0.1	0.2	0.1	0.8
6 per cent . . . . .	0.4	0.5	0.1	1.3
More than 6 per cent but less than 6½ per cent . . . . .	2.6	2.7	2.1	2.7
6½ per cent . . . . .	1.4	0.8	1.4	2.3
More than 6½ per cent but less than 7 per cent . . . . .	5.7	5.5	5.0	5.1
7 per cent . . . . .	10.1	9.9	9.3	8.5
More than 7 per cent but less than 7½ per cent . . . . .	9.3	8.4	7.7	7.2
7½ per cent . . . . .	9.0	8.4	8.5	8.1
More than 7½ per cent but less than 8 per cent . . . . .	13.1	13.0	13.1	11.7
8 per cent . . . . .	7.0	6.6	6.7	6.3
More than 8 per cent and up to 8½ per cent . . . . .	35.4	34.9	37.2	35.2
More than 8½ per cent . . . . .	2.2	3.8	4.4	4.8
<b>Total . . . . .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Excludes term loans, farm development loans and personal instalment loans. Comprises categories of loans specifically exempted from the prescribed maximum overdraft requirement such as, short-term mortgage and bridging loans and post-shipment wool advances subject to a disincentive rate of interest. The maximum rate chargeable on overdraft advances was raised to 7½ per cent per annum on 14 October 1968, 7¼ per cent per annum on 1 August 1969 and 8¼ per cent per annum on 9 March 1970.

**MAJOR TRADING BANKS: FIXED DEPOSITS(a), BY RATE OF INTEREST  
JUNE 1970 TO DECEMBER 1971**

(Source: Reserve Bank of Australia)

(Proportion at each rate to total—per cent)

Interest rate per annum	End of—			
	June 1970	December 1970	June 1971	December 1971
More than 4 per cent but less than 4¼ per cent . . . . .	..	..	..	..
4¼ per cent and less than 4½ per cent . . . . .	0.1	..	..	..
4½ per cent and less than 4¾ per cent . . . . .	14.1	3.1	0.1	..
4¾ per cent and less than 5 per cent . . . . .	36.1	22.6	1.9	..
5 per cent and less than 5½ per cent . . . . .	22.5	29.6	37.4	28.4
5½ per cent and less than 5¾ per cent . . . . .	6.4	16.4	19.8	19.2
5¾ per cent and less than 5¾ per cent . . . . .	20.8	27.5	28.0	29.9
5¾ per cent and less than 6 per cent . . . . .	..	..	..	0.1
6 per cent and less than 6¼ per cent . . . . .	..	0.1	1.8	3.4
6¼ per cent and less than 6½ per cent . . . . .	..	..	..	..
6½ per cent . . . . .	..	0.7	11.0	18.9
<b>Total . . . . .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Excludes Commonwealth and State Government fixed deposits.

### Savings banks

For information on the origin of savings banks in Australia, see Year Book No. 50, page 854, and earlier issues.

All savings banks, including trustee savings banks, but not State savings banks, are subject to the *Banking Act* 1959-1967. Details of this Act and the special provisions applying to savings banks are given in Year Book No. 46, pages 759-60.

In the tables on pages 499-500 balance sheet and profit and loss account information for the years 1967 to 1971 does not relate to a uniform accounting period but rather to the financial years of the banks which ended in the years shown. For balance dates of individual savings banks see annual bulletin *Banking and Currency* (5.1).

The number of operative accounts excludes school bank accounts and small inoperative accounts. The other sections of the tables relating to depositors' balances, etc., include school bank accounts, small inoperative accounts, investment accounts, deposit stock and non-interest bearing cheque accounts at the State Savings Bank of Victoria and the Savings Bank of South Australia, and fixed deposit accounts and non-interest bearing cheque accounts at the trustee savings banks in Tasmania.

At 30 June 1971 all savings banks were paying interest on deposits at rates of up to 5.00 per cent. For accounts other than friendly and other societies the maximum interest bearing amount in any one account was \$20,000. There is no limit on the maximum interest bearing amount for society cheque accounts. Interest rates charged on loans made by the savings banks were: housing loans—up to 7.00 per cent; other loans—up to 8.25 per cent.

At 30 June 1971 savings banks operated 5,465 branches, 2,795 of these being in the "metropolitan area". Savings bank facilities were also available at 15,248 agencies throughout Australia.

#### SAVINGS BANKS(a): LIABILITIES AND ASSETS(b), 1967 TO 1971

(\$ million)

##### LIABILITIES

	Paid-up capital	Reserve funds (used in the business of the bank)	Balance of profit and loss account	Total share-holders' funds	Depositors' balances	Balances due to other banks	Bills payable and all other liabilities (c)	Total
1967 . . .	23.0	114.2	5.5	143.1	5,840.0	12.7	185.5	6,181.4
1968 . . .	24.0	125.0	6.5	155.4	6,284.4	13.3	203.9	6,657.0
1969 . . .	25.0	132.7	6.7	164.4	6,783.5	13.4	222.2	7,183.6
1970 . . .	31.0	137.4	7.3	175.7	7,161.2	14.2	236.6	7,587.7
1971 . . .	31.0	149.8	8.4	189.2	7,722.0	16.8	258.9	8,186.9

##### ASSETS

			Australian public securities			
Coin, bullion, notes and deposits with Reserve Bank	Deposits in Australia with trading banks	Commonwealth and States		Local and semi- government authorities	Other securities	
		Treasury bills and notes	Other securities			
1967 . . .	509.5	145.6	16.5	2,184.1	1,336.7	9.6
1968 . . .	533.2	168.9	31.4	2,216.7	1,483.4	11.0
1969 . . .	553.5	168.7	61.0	2,246.6	1,649.9	14.7
1970 . . .	585.1	150.8	74.7	2,232.6	1,791.9	16.5
1971 . . .	659.8	123.1	58.6	2,287.5	1,963.0	28.7

	Loans to authorised dealers in short-term money market	Cheques and bills of, and balances with and due from other banks(d)	Loans(e), advances and bills discounted	Bank premises, furniture and sites	Bills receivable and remittances in transit	All other assets	Total
1967 . . .	46.8	7.9	1,779.3	75.0	6.7	63.7	6,181.4
1968 . . .	27.5	6.7	2,026.1	83.0	1.6	67.5	6,657.0
1969 . . .	40.1	9.7	2,270.5	90.5	2.0	76.4	7,183.6
1970 . . .	54.1	167.8	2,337.3	98.2	0.4	78.3	7,587.7
1971 . . .	78.6	195.0	2,602.9	102.6	0.3	86.9	8,186.9

(a) Excludes Savings Bank Division of the Rural and Industries Bank of Western Australia. (b) This table relates to liabilities and assets both inside and outside Australia. (c) Includes provisions for contingencies. (d) Includes deposits with and loans to specified lenders other than trading banks. (e) Other than loans to dealers in the short-term money market.

**SAVINGS BANKS(a): PROFIT AND LOSS, APPROPRIATION OF PROFITS AND  
DIVIDENDS, 1967 TO 1971**  
(\$ million)

<i>Profit and loss</i>				<i>Profits appropriated to—</i>				
	<i>Net earnings (b)</i>	<i>Ex- penses (c)</i>	<i>Income, land and other taxes and pay- ments in lieu of taxes</i>	<i>Net profit</i>	<i>Reserve funds</i>	<i>Writing- off bank premises</i>	<i>Other appro- priations</i>	<i>Dividends paid and proposed</i>
1967 . .	109.2	86.0	5.6	17.6	8.2	2.4	4.2	2.2
1968 . .	121.0	94.4	7.5	19.1	8.8	2.5	3.9	2.9
1969 . .	131.2	108.5	7.7	15.0	7.0	2.0	2.3	3.4
1970 . .	149.6	121.4	9.6	18.6	9.9	1.9	3.0	3.2
1971 . .	179.4	141.2	11.4	26.7	13.4	1.9	6.3	4.1

(a) Excludes Savings Bank Division of the Rural and Industries Bank of Western Australia. (b) Discount and interest earned, net exchange, commissions and other items (including transfers from contingencies accounts), after deducting interest paid and accrued on deposits, rebate on bills current at balance date, amounts written off assets, and losses on realisation of assets and transfers to the credit of contingencies accounts (out of which accounts provisions for all bad and doubtful debts have been made). (c) Includes directors' fees.

**SAVINGS BANKS: BUSINESS TRANSACTED IN AUSTRALIA  
1966-67 TO 1970-71**

	<i>Number of operative accounts</i>	<i>Deposits (a)</i>	<i>With- drawals (a)</i>	<i>Interest added</i>	<i>Depositors' balances at end of year</i>
	'000	\$m	\$m	\$m	\$m
1966-67 . .	13,133	7,424.9	7,086.9	173.0	5,764.7
1967-68 . .	13,823	8,355.5	8,088.5	189.9	6,221.5
1968-69 . .	14,534	9,423.8	9,154.1	215.8	6,707.1
1969-70 . .	15,291	10,671.9	10,508.9	234.6	7,104.7
1970-71 . .	16,178	12,324.0	12,045.7	251.6	7,634.5

(a) Includes inter-branch transfers.

**SCHOOL SAVINGS BANKS: AUSTRALIA, 1967 TO 1971**

<i>End of June—</i>	<i>Number of school agencies</i>	<i>Number of operative accounts</i>	<i>Depositors' balances</i>
		'000	\$'000
1967 . . . .	10,301	1,445	24,815
1968 . . . .	10,400	1,516	26,482
1969 . . . .	10,957	1,584	28,476
1970 . . . .	11,042	1,600	28,079
1971 . . . .	9,617	1,598	28,808



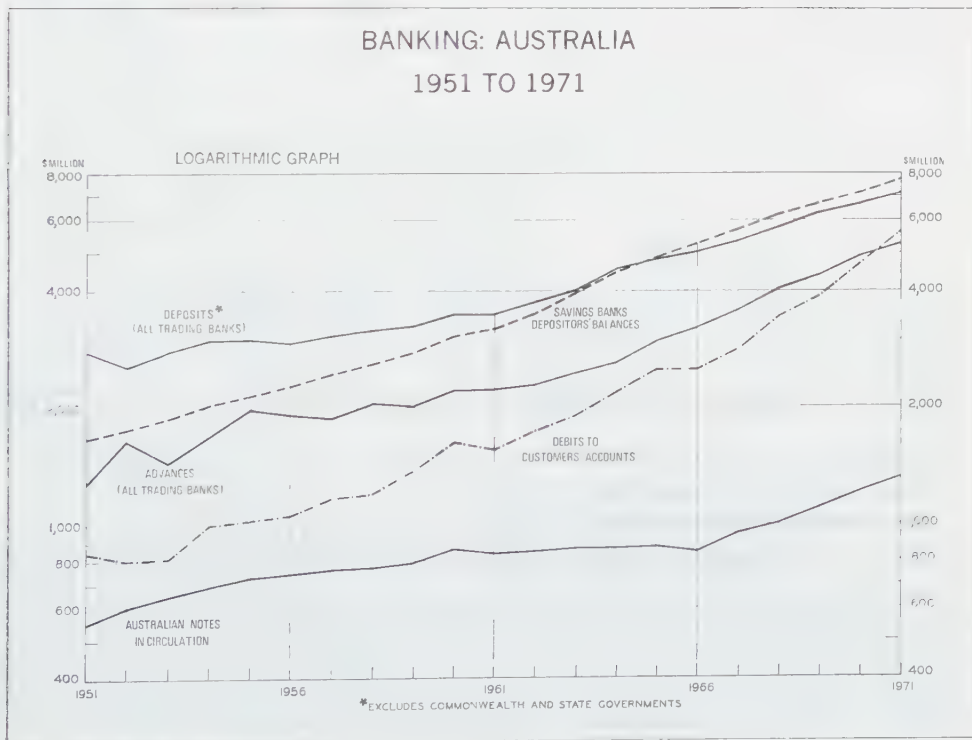
**SAVINGS BANKS: HOUSING FINANCE TRANSACTIONS WITHIN AUSTRALIA  
1966-67 TO 1970-71**

<i>Housing loans approved to—</i>							
<i>Individuals</i>							
	<i>Dwellings not previously occupied</i>		<i>Dwellings previously occupied</i>		<i>Alterations and additions</i>	<i>Total</i>	<i>Building societies</i>
	<i>Number(a)</i> <i>'000</i>	<i>\$m(b)</i>	<i>Number(a)</i> <i>'000</i>	<i>\$m(b)</i>	<i>\$m</i>	<i>\$m</i>	<i>\$m</i>
1966-67(c) . .	23.4	161.8	28.9	173.4	5.7	340.9	23.1
1967-68(c) . .	25.1	180.9	32.5	207.4	6.6	395.0	22.0
1968-69(c) . .	26.1	200.7	33.8	230.9	7.5	439.1	19.5
1969-70 . .	25.6	204.2	35.6	257.2	7.8	469.2	12.7
1970-71 . .	27.7	237.9	40.5	320.3	9.0	567.2	13.9

<i>Housing loans approved to individuals—</i>				<i>Balances outstanding on housing loans to—</i>		<i>Interest debited to loan accounts of individuals</i>
	<i>Cancellation of loans previously approved(d)</i>		<i>Undrawn commitments at end of year</i>	<i>Individuals</i>	<i>Building societies</i>	
	<i>Number(a)</i> <i>'000</i>	<i>\$m(b)</i>	<i>\$m</i>	<i>\$m(e)</i>	<i>\$m</i>	<i>\$m</i>
1966-67(c) . .	n.a.	n.a.	83.4	1,304.5	244.2	n.a.
1967-68(c) . .	n.a.	n.a.	96.5	1,501.7	249.5	n.a.
1968-69(c) . .	n.a.	n.a.	105.1	1,715.2	246.3	n.a.
1969-70 . .	3.6	26.5	114.4	1,898.3	245.3	106.9
1970-71 . .	4.1	32.2	129.0	2,124.9	238.6	130.1

(a) Number of dwelling units for which first mortgage loans approved. (b) Includes second mortgage finance to complete original purchase or construction. (c) Includes details relating to the external territories. (d) Includes amounts cancelled as a result of periodic examinations by banks of undrawn commitments. (e) Includes interest debited to loan accounts.



## Development banks

### Commonwealth Development Bank of Australia

The Commonwealth Development Bank of Australia was established by the *Commonwealth Banks Act* 1959 and commenced operations on 14 January 1960. It was formed basically from an amalgamation of the Mortgage Bank and Industrial Finance Departments of the Commonwealth Bank. Under the Act the Bank is authorised to provide assistance for the development of worthwhile enterprises in the fields of primary and secondary industries, which would otherwise be unable to obtain the necessary finance on reasonable and suitable terms and conditions. The Commonwealth Development Bank is managed by a General Manager under the Managing Director of the Commonwealth Banking Corporation and its policy is determined by the Board of that Corporation. The capital of the Development Bank consists of the capital of the Mortgage Bank and Industrial Finance Departments of the Commonwealth Bank immediately prior to 14 January 1960, \$10 million provided by the Reserve Bank \$20 million appropriated from the Consolidated Revenue Fund in 1961-62 by the *Commonwealth Banks Act* 1961 and the *Commonwealth Banks Act* 1962, \$10 million appropriated in 1963-64 by the *Commonwealth Banks Act* 1963, and such other sums as are provided from the Commonwealth Development Bank Reserve Fund. The net profits of the Bank are paid to the Commonwealth Development Bank Reserve Fund, which at 30 June 1971 stood at \$31.0 million. Net profits in 1969-70 and 1970-71 amounted to \$2.1 million and \$1.8 million respectively.

#### COMMONWEALTH DEVELOPMENT BANK OF AUSTRALIA: LIABILITIES 30 JUNE 1967 TO 1971 (\$ million)

30 June—	Capital	Reserve fund	Balances due to other banks	Deposits, bills payable, all other liabilities	Total
1967 . . .	61.7	23.2	91.3	30.0	206.1
1968 . . .	61.7	25.2	112.8	32.3	232.0
1969 . . .	61.7	27.2	131.3	34.7	254.9
1970 . . .	61.7	29.3	142.2	32.5	265.6
1971 . . .	61.7	31.0	157.7	32.3	282.7

#### COMMONWEALTH DEVELOPMENT BANK OF AUSTRALIA: ASSETS 30 JUNE 1967 TO 1971 (\$ million)

30 June—	Coin, bullion, notes and cash at bankers	Australian public securities (incl. Treasury bills)	Other securities	Loans to authorised dealers in short-term money market	Cheques and bills of other banks	Loans, advances, and bills discounted	All other assets	Total
1967 . . .	0.3	1.2	0.3	0.5	1.2	202.0	0.6	206.1
1968 . . .	0.5	1.2	0.3	0.4	1.4	227.5	0.8	232.0
1969 . . .	0.8	1.2	0.2	..	1.5	250.2	0.9	254.9
1970 . . .	0.8	0.8	0.3	..	1.7	261.0	1.0	265.6
1971 . . .	0.8	0.7	0.2	..	1.9	277.8	1.2	282.7

### Australian Resources Development Bank Limited

The Australian Resources Development Bank Limited was established in 1967 with equity capital of \$3 million subscribed by the major trading banks. It was given the status of a bank by the *Banking Act* 1967 and opened for business on 29 March 1968. The main object of the Australian Resources Development Bank is to assist Australian enterprises to participate more fully in the development of Australia's natural resources. It provides finance to enterprises engaged in major developmental projects by direct loans, investing in equity capital or by refinancing loans made by trading banks acting individually or as a group. The Australian Resources Development Bank obtains funds by accepting deposits and by borrowing on the Australian and overseas capital markets.

**AUSTRALIAN RESOURCES DEVELOPMENT BANK LIMITED: LIABILITIES**  
**30 SEPTEMBER 1968 TO 1971**  
(\$ million)

30 September—	Capital	Reserve fund	Balances due to other banks	Deposits, bills payable, all other liabilities	Total
1968 . . .	3.0	..	2.3	28.2	33.4
1969 . . .	3.0	0.3	15.4	73.2	91.9
1970 . . .	3.0	0.5	27.7	163.6	194.8
1971 . . .	3.0	1.3	42.3	256.6	303.1

**AUSTRALIAN RESOURCES DEVELOPMENT BANK LIMITED: ASSETS**  
**30 SEPTEMBER 1968 TO 1971**  
(\$ million)

30 September—	Coin, bullion, notes and cash at bankers	Australian public securities (incl. Treasury bills)	Other securities	Loans to authorised dealers in short-term money market	Cheques and bills of other banks	Loans, advances, and bills discounted	All other assets	Total
1968 . . .	1.2	0.5	..	0.5	24.3	6.8	0.2	33.4
1969 . . .	0.3	0.2	..	0.1	89.8	1.0	0.4	91.9
1970 . . .	..	0.2	..	3.0	187.3	3.1	1.1	194.8
1971 . . .	0.1	0.2	0.1	9.4	283.6	6.2	3.4	303.1

## INSURANCE

### Legislation

Section 51 of the Commonwealth Constitution confers the necessary powers on the Commonwealth Parliament to legislate with respect to 'insurance other than State insurance; also State insurance extending beyond the limits of the State concerned'. Commonwealth legislation includes the *Marine Insurance Act* 1909–1966 defining the limits of marine insurance and regulating the terms of contracts, etc., the *Insurance Act* 1932–1966 requiring the lodgment of deposits by insurance companies, and the *Life Insurance Act* 1945–1965 generally regulating life insurance business in Australia. The *Marine Insurance Act* 1909–1966 and the *Insurance Act* 1932–1966 have limited application, and except for life insurance business, which is regulated by the *Life Insurance Act* 1945–1965, insurance business is conducted almost entirely under State laws.

### Insurance Act 1932–1966

Companies, persons or associations of persons carrying on insurance business in Australia or in any Territory of Australia are required to lodge a deposit with the Commonwealth Treasurer. Money deposited is invested by the Treasurer in prescribed securities selected by the depositor and all interest is paid to depositors. Deposits remain as security against liability to policy holders and are available to satisfy judgments obtained in respect of policies. Deposits held by States on 1 February 1932 could, however, remain with the States subject to the conditions embodied in the laws of the States, and depositors to the extent of the value of these deposits were exempt from liability to make deposits under the Commonwealth Act.

The following are not regarded as insurance business under the Act: staff superannuation schemes; schemes of religious organisations solely for insurance of their property; friendly society, union and association schemes involving superannuation or insurance benefits to employees.

This Act does not apply to State insurance within the limits of the State concerned, and under the *Life Insurance Act* 1945–1965 ceased to apply to life insurance business.

### Life Insurance Act 1945–1965

The objects of this Act are: (a) to replace all State legislation on the subject of life insurance, except that relating to the life insurance operations of State Government insurance offices within the State concerned, and to provide uniform legislation for the whole of Australia; (b) to appoint an Insurance Commissioner to exercise active supervision of the activities of life insurance companies, with a view to securing the greatest possible protection for policy holders; (c) to set up adequate

machinery for dealing with any company that fails to maintain a required minimum standard of solvency. The Act came into operation on 20 June 1946. A summary of the provisions of the Act is given in Year Book No. 37, pages 595-7. The Insurance Commissioner issues an annual report which contains detailed information on the operations of life insurance companies.

### Deposits under Insurance Acts

Deposits lodged under the Insurance Acts at 30 June 1971 totalled \$39.5 million, comprising \$4.8 million held by the Commonwealth in respect of life insurance, and \$34.7 million held by the Commonwealth in respect of other forms of insurance. The deposits consisted of Commonwealth Government securities \$23.1 million, United Kingdom Government securities \$2.0 million, fixed deposits \$1.0 million, bank guarantees and undertakings \$9.9 million, corporation debentures and stock \$0.8 million, titles and mortgages \$2.5 million, and other securities \$0.2 million.

### Life insurance

Since 1947, returns lodged under the *Life Insurance Act 1945-1965* have been used to compile life insurance statistics. The statistics included in the following tables relate to the Australian and overseas business of companies with head offices in Australia together with the Australian business of companies with head offices overseas. Unless otherwise stated, life insurance business in Australia excludes life insurance business in Papua New Guinea. The information shown has been compiled from returns of life insurance business submitted in the financial years which ended during the year stated.

### Offices transacting business

The number of companies which transacted life insurance business in Australia during 1970 was 46. Of these, 33 were companies incorporated outside Australia or were subsidiaries of such companies. Nine companies, including 4 incorporated outside Australia, were mutual companies. All companies conducted ordinary business and 45 conducted superannuation business. Industrial business was conducted by 11 companies, all of which also conducted superannuation business. In addition two State Government institutions conduct life insurance business only in their own State.

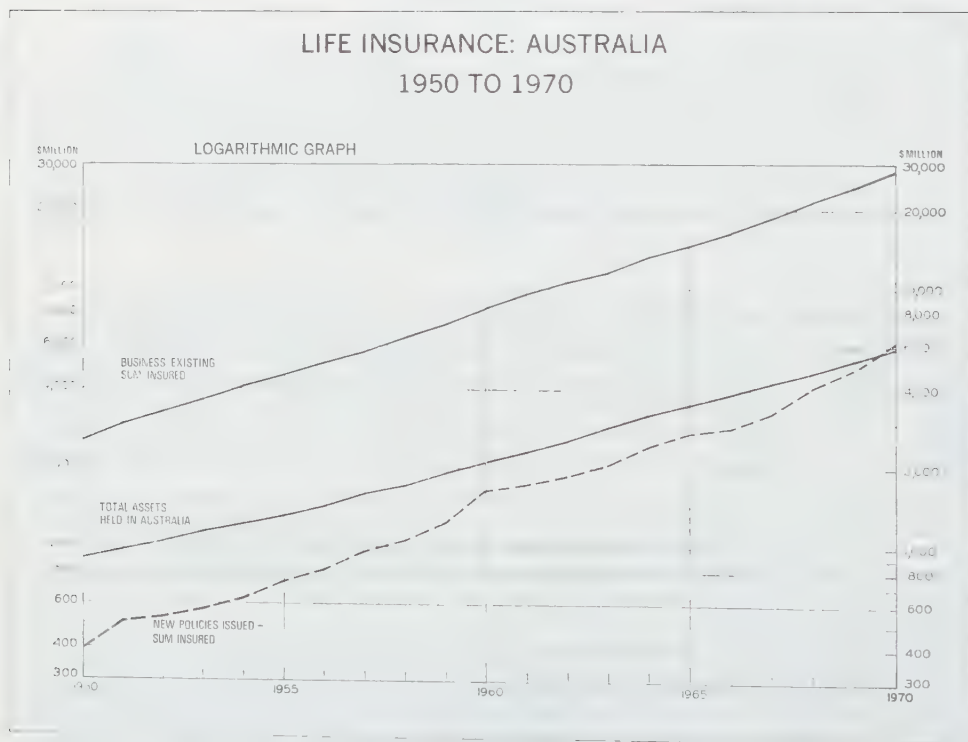


PLATE 32



## LIFE INSURANCE: SUMMARY, AUSTRALIA, 1966 TO 1970

	Insurance and endowment policies			Annuity policies	
	Number of policies	Sum insured (\$ million)	Annual premiums (\$ million)	Number of policies	Annuities per annum (\$ million)
ORDINARY BUSINESS					
New policies issued—					
1966(a) . . .	380,276	1,816.9	40.4	75	0.1
1967(a) . . .	409,403	2,102.5	47.3	85	0.1
1968(a) . . .	436,928	2,606.6	59.1	95	0.1
1969 . . .	464,062	3,088.4	65.7	109	0.1
1970 . . .	504,613	3,777.9	75.3	55	0.1
Policies discontinued or reduced(b)—					
1966(a) . . .	250,789	651.4	16.1	149	0.1
1967(a) . . .	246,139	709.4	17.4	210	0.1
1968(a) . . .	258,639	799.7	18.2	186	0.1
1969 . . .	248,906	974.3	20.3	181	0.1
1970 . . .	273,765	1,153.2	24.5	204	0.1
Policies existing at end of—					
1966(a) . . .	4,188,300	11,623.0	299.3	2,393	1.0
1967(a) . . .	4,351,564	13,016.1	329.2	2,268	1.0
1968(a) . . .	4,529,853	14,823.0	370.1	2,177	1.1
1969 . . .	4,676,164	16,806.1	411.7	2,065	1.3
1970 . . .	4,907,012	19,430.8	462.6	1,951	1.1
INDUSTRIAL BUSINESS					
New policies issued—					
1966(a) . . .	132,246	130.3	5.1	..	..
1967(a) . . .	136,764	140.4	5.5	..	..
1968(a) . . .	132,504	145.7	5.8	..	..
1969 . . .	139,360	165.0	6.5	..	..
1970 . . .	138,647	198.5	7.3	..	..
Policies discontinued or reduced(b)—					
1966(a) . . .	243,759	82.7	3.7	..	..
1967(a) . . .	177,219	77.7	3.3	..	..
1968(a) . . .	174,576	86.3	3.7	..	..
1969 . . .	169,893	91.1	3.8	..	..
1970 . . .	168,600	100.2	4.1	..	..
Policies existing at end of—					
1966(a) . . .	2,643,633	918.5	38.1	..	..
1967(a) . . .	2,603,178	981.2	40.3	..	..
1968(a) . . .	2,561,106	1,040.6	42.4	..	..
1969 . . .	2,530,386	1,114.4	45.1	..	..
1970 . . .	2,500,433	1,212.8	48.3	..	..
SUPERANNUATION BUSINESS					
New policies issued—					
1966(a) . . .	105,455	929.4	26.5	57	3.8
1967(a) . . .	88,478	1,053.3	29.4	81	8.6
1968(a) . . .	89,085	1,328.1	33.1	83	6.3
1969 . . .	94,771	1,591.6	41.7	64	5.0
1970 . . .	74,334	2,298.6	58.8	60	10.6
Policies discontinued or reduced(b)—					
1966(a) . . .	66,716	401.6	10.0	45	4.0
1967(a) . . .	73,319	434.7	11.3	44	3.1
1968(a) . . .	67,338	539.8	14.3	60	7.0
1969 . . .	114,664	709.1	17.7	43	7.8
1970 . . .	126,552	940.0	26.5	33	4.5
Policies existing at end of—					
1966(a) . . .	684,576	4,126.9	117.2	868	23.3
1967(a) . . .	699,735	4,745.4	135.3	905	28.8
1968(a) . . .	721,482	5,533.7	154.2	928	28.1
1969 . . .	752,302	6,439.2	179.2	950	25.4
1970 . . .	699,652	7,797.8	211.5	977	31.4

(a) Includes life insurance business in Papua New Guinea. (b) Includes policies matured, surrendered, forfeited, transferred to overseas registers, converted to other classes of business, etc.

**LIFE INSURANCE: POLICIES DISCONTINUED OR REDUCED IN AUSTRALIA  
BY CAUSE OF DISCONTINUANCE OR REDUCTION, 1966 TO 1970(a)(b)**

<i>Events provided for in policy</i>									
	<i>Death</i>	<i>Maturity</i>	<i>Other (including expiry)</i>	<i>Sur- render</i>	<i>For- feiture</i>	<i>Transfer</i>	<i>Other causes</i>	<i>Total</i>	
<b>ORDINARY BUSINESS</b>									
Number of policies—									
1966(c)	20,297	62,970	9,233	97,514	66,096	—781	—4,539	250,789	
1967(c)	20,886	68,425	3,127	97,985	62,126	—1,104	—5,306	246,139	
1968(c)	22,532	70,339	2,903	104,415	60,504	—1,967	—87	258,639	
1969	21,957	69,445	3,577	107,713	55,885	—2,385	—7,286	248,906	
1970	23,047	73,132	4,241	121,917	65,380	—1,786	—12,166	273,765	
Sum insured (\$'000)—									
1966(c)	37,241	40,093	64,377	242,970	277,012	—2,367	—7,961	651,365	
1967(c)	39,817	49,248	83,020	272,396	273,629	—4,474	—4,235	709,402	
1968(c)	46,144	52,568	92,477	309,793	315,594	—6,543	—10,340	799,694	
1969	48,298	55,046	165,033	425,186	291,956	—9,737	—1,503	974,278	
1970	54,235	63,201	158,407	506,645	394,872	—8,346	—15,845	1,153,169	
<b>INDUSTRIAL BUSINESS</b>									
Number of policies—									
1966(c)	12,417	135,249	1,045	63,121	31,821	105	1	243,759	
1967(c)	12,368	67,134	3,806	62,421	31,602	63	—175	177,219	
1968(c)	12,689	58,945	7,370	61,374	34,460	—255	—7	174,576	
1969	11,947	67,716	..	55,481	34,861	—133	21	169,893	
1970	12,554	69,069	—1	52,432	34,610	40	—104	168,600	
Sum insured (\$'000)—									
1966(c)	2,474	17,616	179	27,646	34,730	72	4	82,720	
1967(c)	2,601	9,237	744	27,537	37,527	45	—5	77,688	
1968(c)	2,843	8,640	1,524	31,937	41,457	—96	9	86,314	
1969	2,800	10,760	..	32,307	45,247	—22	1	91,095	
1970	3,152	11,236	..	34,511	51,196	54	18	100,167	
<b>SUPERANNUATION BUSINESS</b>									
Number of policies—									
1966(c)	3,255	7,140	615	34,878	1,485	8	19,335	66,716	
1967(c)	3,793	7,428	983	38,421	1,542	3	21,150	73,319	
1968(c)	3,390	7,806	103	36,881	1,447	—11	17,722	67,338	
1969	3,881	8,381	185	48,870	1,471	9	51,867	114,664	
1970	3,661	9,193	181	53,065	1,655	5	58,792	126,552	
Sum insured (\$'000)—									
1966(c)	13,208	10,544	30,506	232,595	14,597	—19	100,164	401,595	
1967(c)	15,256	14,189	29,425	258,790	18,517	38	98,513	434,727	
1968(c)	16,659	17,330	44,596	341,571	22,172	—92	97,566	539,802	
1969	19,058	18,639	53,617	430,440	19,024	—31	168,389	709,136	
1970	23,053	23,573	72,008	605,648	21,848	—1,063	194,976	940,043	

(a) Excludes annuities. (b) See footnote (b) on page 505.

(c) Includes life insurance business in Papua New Guinea.

Minus sign (—) denotes an increase in existing business due to an excess of transfers from overseas registers to Australian registers, or conversions from other classes of business over discontinuances.

**LIFE INSURANCE: REVENUE FROM PREMIUMS, AUSTRALIA, 1966 TO 1970**  
(\$'000)

	<i>Ordinary business</i>		<i>Industrial business</i>	<i>Superannuation business</i>		<i>Total, all business combined</i>
	<i>Insurance and endowment premiums</i>	<i>Consideration for annuities</i>	<i>Insurance and endowment premiums</i>	<i>Insurance and endowment premiums</i>	<i>Consideration for annuities</i>	
1966(a)	298,246	485	36,800	121,654	9,558	466,745
1967(a)	327,258	606	38,564	142,566	9,495	518,489
1968(a)	371,941	1,132	40,716	165,530	9,893	589,212
1969	415,629	1,293	42,968	186,856	9,768	656,514
1970	469,339	675	45,973	222,330	11,967	750,287

(a) Includes life insurance business in Papua New Guinea.

**LIFE INSURANCE: PAYMENTS TO POLICY-HOLDERS, AUSTRALIA**  
1966 TO 1970  
(\$'000)

	<i>Claims</i>	<i>Surrenders</i>	<i>Annuities</i>	<i>Cash bonuses</i>	<i>Total</i>
<b>ORDINARY BUSINESS</b>					
1966(a)	101,449	36,375	898	817	139,538
1967(a)	115,631	40,722	931	851	158,134
1968(a)	128,307	46,235	949	1,280	176,771
1969	139,781	53,526	977	1,338	195,622
1970	159,360	57,029	994	1,487	228,870
<b>INDUSTRIAL BUSINESS</b>					
1966(a)	24,870	5,798	..	1	30,669
1967(a)	14,517	6,185	..	..	20,702
1968(a)	14,757	6,590	..	1	21,348
1969	15,909	6,614	..	1	22,525
1970	17,496	6,953	..	..	24,450
<b>SUPERANNUATION BUSINESS</b>					
1966(a)	27,965	27,269	2,037	899	58,171
1967(a)	34,117	27,649	2,401	1,025	65,193
1968(a)	40,437	33,854	2,694	1,207	78,192
1969	45,333	42,374	3,143	1,003	91,853
1970	57,666	55,200	3,077	998	116,940

(a) Includes life insurance business in Papua New Guinea.

**LIFE INSURANCE: TOTAL REVENUE, 1966-1970**  
(\$'000)

(\$'000)

Australia and overseas				Total revenue		
	Insurance and endowment premiums	Consideration for annuities granted	Net interest dividends and rents	All other revenue	Australia (a)	Overseas
ORDINARY BUSINESS						
1966 . . . .	421,072	15,110	193,661	20,705	450,285	200,264
1967 . . . .	445,631	10,483	206,809	20,042	493,627	189,342
1968 . . . .	491,446	10,794	225,001	43,544	572,737	198,047
1969 . . . .	545,681	10,730	250,938	39,431	635,488	211,294
1970 . . . .	610,678	10,299	279,643	50,724	719,140	232,204
INDUSTRIAL BUSINESS						
1966 . . . .	41,789	..	19,818	402	54,436	7,574
1967 . . . .	42,999	..	20,500	478	57,146	6,831
1968 . . . .	44,915	..	21,995	1,848	62,196	6,561
1969 . . . .	47,269	..	23,946	1,202	65,563	6,855
1970 . . . .	50,377	..	26,701	1,335	71,325	7,087
SUPERANNUATION BUSINESS						
1966 . . . .	131,721	11,033	48,219	4,412	179,483	15,904
1967 . . . .	151,245	10,674	54,940	3,582	207,083	13,359
1968 . . . .	174,697	11,141	63,180	12,706	247,003	14,721
1969 . . . .	197,456	11,237	71,974	13,913	278,294	16,284
1970 . . . .	233,518	13,825	83,331	28,026	339,175	19,525

(a) Includes life insurance business in Papua New Guinea.

**LIFE INSURANCE: TOTAL EXPENDITURE, 1966 TO 1970**  
(\$'000)

Australia and overseas										
		Claims and annuities paid	Surren- ders	Cash bonuses paid to policy- holders	Com- mission	Other expenses of manage- ment	All other expendi- ture	Total expenditure		
								Australia (a)	Overseas	
ORDINARY BUSINESS										
1966	.	.	161,708	51,273	1,699	41,134	47,228	19,968	218,721	104,287
1967	.	.	172,580	56,485	1,624	44,113	51,258	(b)137,105	240,693	222,472
1968	.	.	186,897	62,942	2,088	50,812	55,574	87,503	273,542	172,273
1969	.	.	202,122	74,582	2,260	59,152	62,856	29,663	309,235	121,400
1970	.	.	228,462	88,708	2,464	68,885	72,105	29,093	360,745	128,971
INDUSTRIAL BUSINESS										
1966	.	.	29,409	6,376	1	6,001	7,056	1,721	43,598	6,965
1967	.	.	16,851	6,795	..	6,255	7,211	(b)7,719	34,093	10,741
1968	.	.	16,445	7,211	1	6,383	7,224	5,629	35,852	7,042
1969	.	.	18,476	7,256	1	6,818	7,797	2,720	38,306	4,762
1970	.	.	20,104	7,620	..	7,557	8,682	2,060	41,099	4,926
SUPERANNUATION BUSINESS										
1966	.	.	33,116	30,456	985	5,383	11,069	13,086	85,629	8,464
1967	.	.	39,255	29,330	1,105	5,888	12,032	(b)25,702	93,401	19,914
1968	.	.	46,784	35,767	1,288	6,375	13,689	18,008	114,323	7,588
1969	.	.	51,483	45,719	1,088	6,936	14,826	26,830	138,032	8,850
1970	.	.	64,936	58,608	1,069	8,019	17,181	55,262	192,669	12,406

(a) Includes life insurance business in Papua New Guinea. Sterling devaluation on 18 November 1967.

(b) Includes adjustments which have resulted from



**LIFE INSURANCE: LIABILITIES, AUSTRALIA AND OVERSEAS, 1970**  
(\$ million)

	<i>Life insurance business</i>	<i>Other classes of business</i>	<i>Total liabilities</i>
Shareholders' capital—			
Authorised . . . . .	..	71.6	71.6
Less un-issued . . . . .	..	41.1	41.1
Subscribed capital . . . . .	..	30.5	30.5
Paid-up—			
In money . . . . .	..	25.3	25.3
Otherwise than in money . . . . .	..	4.8	4.8
Total paid-up capital . . . . .	..	30.1	30.1
Life insurance statutory funds—			
Ordinary business . . . . .	5,038.9	..	5,038.9
Industrial business . . . . .	469.8	..	469.8
Superannuation business . . . . .	1,392.7	..	1,392.7
Total statutory funds . . . . .	6,901.4	..	6,901.4
Funds in respect of other classes of business . . . . .	..	34.5	34.5
General reserves . . . . .	71.3	36.7	108.0
Profit and loss account balance . . . . .	..	5.2	5.2
<i>Total shareholders' capital, insurance funds and reserves</i>	<i>6,972.7</i>	<i>106.5</i>	<i>7,079.2</i>
Other liabilities—			
Deposits . . . . .	35.7	12.8	48.5
Staff provident and superannuation funds . . . . .	2.2	2.4	4.6
Claims admitted or intimated but not paid . . . . .	71.3	28.2	99.5
Premiums paid in advance and in suspense . . . . .	7.9	..	7.9
Sundry creditors . . . . .	20.3	3.1	23.4
Bank overdraft . . . . .	50.4	0.7	51.0
Reserves and provisions for taxation . . . . .	44.1	4.1	48.1
All other liabilities . . . . .	33.6	9.1	42.7
<i>Grand total . . . . .</i>	<i>7,238.1</i>	<i>166.9</i>	<i>7,405.0</i>

**LIFE INSURANCE(a): ASSETS HELD IN AUSTRALIA(b), 1966 TO 1970**  
(\$ million)

	1966	1967	1968	1969	1970
Freehold and leasehold property . . . . .	388.2	434.7	501.0	636.6	761.6
Government and municipal securities . . . . .	1,253.4	1,395.6	1,536.2	1,665.5	1,819.3
Other investments . . . . .	958.3	1,073.4	1,241.3	1,408.7	1,578.4
Loans on mortgage . . . . .	976.2	1,036.8	1,108.9	1,188.3	1,235.4
Loans on companies' policies . . . . .	141.8	155.1	174.4	195.5	223.0
Other loans . . . . .	43.8	44.2	54.1	57.8	57.1
All other assets . . . . .	137.9	153.0	177.2	201.2	236.3
<i>Total . . . . .</i>	<i>3,899.9</i>	<i>4,292.7</i>	<i>4,793.1</i>	<i>5,353.8</i>	<i>5,911.1</i>

(a) Includes other classes of business.

(b) Includes Papua New Guinea.

**LIFE INSURANCE: ASSETS, AUSTRALIA AND OVERSEAS, 1970**  
(\$'000)

	<i>Australia(a)</i>			<i>Australia and overseas</i>		
	<i>Life insurance business</i>	<i>Other classes of business</i>	<i>Total</i>	<i>Life insurance business</i>	<i>Other classes of business</i>	<i>Total</i>
<b>Fixed assets—</b>						
Freehold and leasehold property, office premises .	751.2	10.3	761.6	909.3	10.4	919.6
Furniture, etc. . . . .	9.7	1.0	10.6	11.3	1.0	12.3
<i>Total fixed assets</i> . . . . .	<i>760.9</i>	<i>11.3</i>	<i>772.2</i>	<i>920.6</i>	<i>11.4</i>	<i>931.9</i>
<b>Loans—</b>						
On mortgage . . . . .	1,225.3	10.1	1,235.4	1,624.6	10.2	1,634.8
On policies of the company . . . . .	223.0	..	223.0	284.0	..	284.0
Other loans . . . . .	51.1	6.1	57.1	55.8	6.1	61.9
<i>Total loans</i> . . . . .	<i>1,499.4</i>	<i>16.2</i>	<i>1,515.6</i>	<i>1,964.4</i>	<i>16.3</i>	<i>1,980.7</i>
<b>Investments—</b>						
Government securities—						
Australia . . . . .	1,300.5	7.8	1,308.3	1,314.4	7.9	1,322.3
Other . . . . .	11.7	..	11.7	340.4	1.5	341.9
Securities of local and semi-government bodies . . . . .	496.2	3.1	499.3	591.5	3.3	594.8
Other investments . . . . .	1,489.0	89.2	1,578.4	1,869.0	90.2	1,959.1
<i>Total investments</i> . . . . .	<i>3,297.5</i>	<i>100.1</i>	<i>3,397.5</i>	<i>4,115.2</i>	<i>102.8</i>	<i>4,218.0</i>
Cash on deposit, current account and in hand . . . . .	23.2	13.6	36.7	30.5	14.4	44.9
Other assets(b) . . . . .	168.2	20.8	189.0	207.5	21.9	239.3
<b>Grand total</b> . . . . .	<b>5,749.1</b>	<b>162.0</b>	<b>5,911.1</b>	<b>7,238.1</b>	<b>166.9</b>	<b>7,405.0</b>

(a) Includes Papua New Guinea. (b) Includes advances of premiums.

**LIFE INSURANCE COMPANIES: NEW LOANS PAID OVER(a), BY CLASS OF SECURITY AND STATE OR TERRITORY, 1967 TO 1971**  
(\$'000)

	1967(b)	1968(b)	1969	1970	1971
<b>Class of security—</b>					
Mortgage of real estate . . . . .	136,139	161,651	187,498	156,544	157,459
Companies' policies . . . . .	34,520	41,818	48,482	60,920	65,571
Other . . . . .	3,390	6,485	8,049	12,439	10,380
<b>State or Territory(c)—</b>					
New South Wales . . . . .	70,026	91,761	100,726	88,551	104,057
Victoria . . . . .	56,752	58,754	68,576	68,632	61,711
Queensland . . . . .	(d)13,816	(d)18,523	24,672	24,144	21,633
South Australia(e) . . . . .	12,851	14,477	17,492	16,456	18,307
Western Australia . . . . .	15,380	19,157	23,965	22,341	19,588
Tasmania . . . . .	3,768	5,491	6,418	6,081	4,688
Australian Capital Territory . . . . .	1,457	1,790	2,178	3,698	3,425
<b>Total</b> . . . . .	<b>(d)174,050</b>	<b>(d)209,953</b>	<b>244,029</b>	<b>229,903</b>	<b>233,410</b>

(a) Excludes advances of premiums. (b) Excludes new loans paid over by the two State Government Offices.  
(c) State or Territory of location of mortgage, registration of policy or residence of borrower. (d) Includes Papua New Guinea. (e) Includes Northern Territory.

### Fire, marine and general insurance

The following statistics, which are in respect of the Australian business of companies operating in Australia and State Government insurance offices, conform to the following definitions and should be interpreted accordingly.

- (a) *Premiums* represent the full amount receivable in respect of policies issued or renewed in the year, less returns, rebates and bonuses paid or credited to policy-holders during the year. They are not adjusted to provide for premiums unearned at the end of the year and consequently the amounts differ from 'earned premium income' appropriate to the year. In recent years, as the volume of premiums receivable has been increasing, the figures shown in the tables are greater than the premiums earned by insurers.
- (b) *Claims* comprise payments made during the year, plus the estimated amount of outstanding claims at the end of the year, less the estimated amount of outstanding claims at the beginning of the year. Salvage and other amounts recoverable have been deducted.
- (c) *Contributions to fire brigades, commission and agents' charges, and expenses of management* are mainly charges paid during the year.
- (d) *Taxation* is mainly payments made during the year, and includes income tax, pay-roll tax, licence fees, stamp duty (where paid by the company), etc. Income tax paid during the year is based on the income of earlier years.

The figures relate to selected items of statistics and are not construable as 'Profit and Loss' statements or 'Revenue Accounts'.

During 1970-71 revenue from premiums amounted to \$1,005.1 million, and that from net interest on investments, etc. to \$71.2 million, a total of \$1,076.4 million. Expenditure on claims amounted to \$648.5 million, contributions to fire brigades \$26.1 million, commission and agents' charges \$85.0 million, expenses of management \$167.4 million, and taxation \$27.9 million, a total of \$954.8 million.

#### FIRE, MARINE AND GENERAL INSURANCE: PREMIUMS AND CLAIMS BY PRINCIPAL CLASS OF RISK, AUSTRALIA, 1966-67 TO 1970-71 (\$'000)

<i>Class of risk</i>	1966-67	1967-68	1968-69	1969-70	1970-71
PREMIUMS (LESS RETURNS, REBATES AND BONUSES)					
Fire . . . . .	91,144	97,985	106,045	115,332	125,912
Householders' comprehensive . . . . .	41,747	47,581	54,619	63,036	72,198
Loss of profits . . . . .	10,543	12,169	13,691	15,206	18,939
Hailstone(a) . . . . .	7,805	4,375	7,455	5,242	4,531
Marine . . . . .	26,473	28,899	34,059	40,317	48,172
Motor vehicle—					
Compulsory third party . . . . .	90,003	97,883	127,593	143,903	161,820
Other . . . . .	183,330	193,975	205,171	226,819	252,225
Workers' compensation(b) . . . . .	144,444	142,964	149,197	164,574	181,792
Personal accident . . . . .	22,908	25,327	28,465	32,080	36,559
Burglary . . . . .	10,058	11,604	13,586	14,995	16,382
All other . . . . .	43,051	51,419	59,713	69,845	86,610
<b>Total . . . . .</b>	<b>671,506</b>	<b>714,180</b>	<b>799,593</b>	<b>891,351</b>	<b>1,005,140</b>
CLAIMS (LESS AMOUNTS RECOVERABLE)					
Fire . . . . .	36,623	44,119	48,769	54,498	58,559
Householders' comprehensive . . . . .	13,629	15,260	19,871	21,159	24,060
Loss of profits . . . . .	2,948	3,840	5,397	4,488	5,040
Hailstone(a) . . . . .	6,113	2,453	2,531	5,635	3,510
Marine . . . . .	14,715	16,712	21,323	23,008	25,238
Motor vehicle—					
Compulsory third party . . . . .	94,883	110,043	118,585	147,570	154,457
Other . . . . .	124,581	133,709	148,810	172,031	186,473
Workers' compensation(b) . . . . .	95,839	100,381	106,618	117,435	126,850
Personal accident . . . . .	10,343	10,423	11,757	13,376	15,224
Burglary . . . . .	7,885	7,187	7,460	8,121	8,844
All other . . . . .	22,903	25,689	27,400	32,244	40,199
<b>Total . . . . .</b>	<b>430,462</b>	<b>469,815</b>	<b>518,521</b>	<b>599,566</b>	<b>648,454</b>

(a) Excludes hailstone insurance in Tasmania which is included in "All other". (b) Excludes workers' compensation insurance in coal-mining industry in New South Wales.

### Export Payments Insurance Corporation

The Export Payments Insurance Corporation was established under the *Export Payments Insurance Corporation Act 1956* to provide exporters with insurance against risks associated with overseas trade. For further information on the Corporation see Chapter 11, Overseas Transactions.

#### EXPORT PAYMENTS INSURANCE CORPORATION: BUSINESS, 1966-67 TO 1970-71

		1966-67	1967-68	1968-69	1969-70	1970-71
<b>Commercial business—</b>						
Policies and guarantees . . . . .	No.	613	692	746	809	941
Face value of policies current . . . . .	\$'000	238,271	271,076	298,829	343,064	511,105
Maximum contingent liability . . . . .	"	123,589	141,108	158,966	190,067	301,061
Premium income . . . . .	"	598	651	730	861	1,025
Operating costs . . . . .	"	348	388	426	516	585
Claims paid (gross) . . . . .	"	446	854	388	353	939
Recoveries . . . . .	"	111	591	263	212	693
Underwriting reserve . . . . .	"	1,126	1,420	1,897	2,401	2,997
<b>National interest and warehousing business—</b>						
Policy holders . . . . .	No.	4	3	1	2	4
Face value of policies current . . . . .	\$'000	1,932	2,247	1,208	2,420	63,793
Maximum contingent liability . . . . .	"	1,742	1,978	1,087	2,183	42,487
<b>Overseas investment insurance—</b>						
Policies . . . . .	No.	15	29	41	56	78
Face value of policies . . . . .	\$'000	4,699	12,097	19,813	19,505	44,535
Maximum contingent liability . . . . .	"	4,229	10,887	17,832	17,555	40,081

### PENSION AND SUPERANNUATION SCHEMES

#### Government, local government and semi-government pension and superannuation schemes

The Commonwealth and all State Governments have established pension and superannuation schemes for their employees. These schemes are operated through funds to which both the Governments and their employees make contributions. Employees of local government and semi-government authorities are covered either by the Commonwealth and State Government schemes or by a separate scheme of the authority which is operated either through a separately constituted fund or through a life insurance office.



## Schemes operated through separately constituted funds

GOVERNMENT, LOCAL GOVERNMENT, AND SEMI-GOVERNMENT PENSION AND  
SUPERANNUATION SCHEMES OPERATED THROUGH SEPARATELY  
CONSTITUTED FUNDS, 1966-67 TO 1970-71

	1966-67	1967-68	1968-69	1969-70	1970-71
Income—	\$'000	\$'000	\$'000	\$'000	\$'000
Contributions—					
Employees . . . . .	91,244	100,036	114,116	132,846	158,075
Employing authorities . . . . .	105,866	119,395	136,801	148,518	172,083
Interest, dividends and rent . . . . .	63,397	72,050	82,052	92,530	104,958
Other income . . . . .	11,565	15,550	10,138	10,675	12,829
<b>Total income . . . . .</b>	<b>272,071</b>	<b>307,031</b>	<b>343,106</b>	<b>384,568</b>	<b>447,945</b>
Expenditure—					
Pensions . . . . .	103,711	118,488	130,693	144,378	161,200
Lump sum payments—					
On retirement, death, resignation or dismissal(a) . . . . .	54,583	32,274	40,784	72,574	71,359
Gratuities . . . . .	2,503	2,655	3,446	4,496	4,459
Other expenditure . . . . .	11,029	11,598	14,460	14,499	15,819
<b>Total expenditure . . . . .</b>	<b>171,827</b>	<b>165,016</b>	<b>189,384</b>	<b>235,946</b>	<b>252,837</b>
Assets at end of year—					
Cash—					
Deposits with Treasury . . . . .	37,014	39,933	44,159	48,894	60,320
Other deposits and cash . . . . .	14,895	7,832	11,028	17,526	31,765
Commonwealth Government securities . . . . .	120,677	125,530	142,357	142,110	164,148
Local and semi-government securities . . . . .	760,980	845,744	920,821	1,004,223	1,077,721
Mortgages—					
Housing . . . . .	29,972	31,706	34,073	37,903	39,869
Other . . . . .	75,525	103,697	130,077	169,656	220,745
Loans to building societies . . . . .	29,323	31,385	33,076	34,396	34,995
Company shares, debentures and notes . . . . .	87,393	97,541	107,446	122,198	122,166
Other assets . . . . .	79,314	95,960	110,663	108,555	129,988
<b>Total assets(b) . . . . .</b>	<b>1,235,093</b>	<b>1,379,328</b>	<b>1,533,700</b>	<b>1,685,461</b>	<b>1,881,716</b>
Less Sundry creditors, etc. . . . .	16,141	18,361	19,010	22,150	23,297
<b>Accumulated funds(b) . . . . .</b>	<b>1,218,951</b>	<b>1,360,967</b>	<b>1,514,690</b>	<b>1,663,311</b>	<b>1,858,419</b>
Contributors at end of year . . . . .	No. 516,947	No. 547,737	No. 595,204	No. 599,054	No. 619,880
Pensioners at end of year—					
Ex-employees . . . . .	65,712	66,664	68,660	71,083	73,138
Widows . . . . .	28,888	29,651	30,607	31,894	33,214
Children . . . . .	5,663	6,040	6,494	6,904	7,287

(a) Includes refunds of contributions to continuing members.  
of the State Superannuation Fund in South Australia.

(b) Includes assets of the Voluntary Savings Scheme

## Schemes operated through life insurance offices

LOCAL GOVERNMENT AND SEMI-GOVERNMENT PENSION AND  
SUPERANNUATION SCHEMES OPERATED THROUGH  
LIFE INSURANCE OFFICES 1966-67 TO 1970-71

	1966-67	1967-68	1968-69	1969-70	1970-71
Income—					
Contributions—					
Employees . . . . .	\$'000 7,042	7,534	8,502	11,196	13,156
Employing authorities . . . . .	\$'000 8,630	9,481	10,972	14,657	18,120
Contributors at end of year . . . . .	No. 69,594	72,381	75,255	83,528	91,622

### Parliamentary pension and superannuation schemes

Pension and superannuation schemes have been established for members of the Commonwealth and State Parliaments. All the schemes are operated through funds to which the members of Parliament and the Commonwealth or State Governments contribute.

#### PARLIAMENTARY PENSION AND SUPERANNUATION SCHEMES(a), 1966-67 TO 1970-71

	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000	\$'000	\$'000	\$'000	\$'000
<b>Income—</b>					
Contributions—					
Members . . . . .	466	468	530	608	657
Government . . . . .	535	621	648	1,084	1,322
Interest and other income . . . . .	271	260	326	433	400
<b>Total income . . . . .</b>	<b>1,272</b>	<b>1,350</b>	<b>1,503</b>	<b>2,125</b>	<b>2,379</b>
<b>Expenditure—</b>					
Pension payments . . . . .	760	884	1,046	1,199	1,395
Other . . . . .	45	24	68	400	294
<b>Total expenditure . . . . .</b>	<b>805</b>	<b>908</b>	<b>1,114</b>	<b>1,599</b>	<b>1,690</b>
<b>Assets at end of year—</b>					
Cash—					
Deposits with Treasury . . . . .	164	81	124	147	86
Other deposits and cash . . . . .	40	44	10	54	34
Commonwealth Government securities . . . . .	967	962	901	947	1,005
Local government and semi-government securities . . . . .	3,414	3,757	3,872	4,083	4,344
Other assets . . . . .	360	538	871	1,093	1,522
<b>Total assets . . . . .</b>	<b>4,946</b>	<b>5,382</b>	<b>5,779</b>	<b>6,323</b>	<b>6,991</b>
<i>Less</i> Sundry creditors, etc. . . . .	22	17	25	43	21
<b>Accumulated funds . . . . .</b>	<b>4,924</b>	<b>5,365</b>	<b>5,754</b>	<b>6,280</b>	<b>6,970</b>
	No.	No.	No.	No.	No.
<b>Contributors at end of year—</b>					
Males . . . . .	643	645	648	658	656
Females . . . . .	12	12	11	10	9
<b>Pensioners at end of year—</b>					
Ex-members . . . . .	228	253	269	294	304
Widows(b) . . . . .	183	193	202	200	213

(a) Includes the Ministerial Retiring Allowances Fund.

(b) Includes children in receipt of Commonwealth Parliamentary pensions.

**Coal and oil-shale mine workers' superannuation schemes**

In all States except South Australia superannuation schemes have been established for coal and oil-shale mine workers. These schemes are operated through funds to which mine workers, mine owners and the State Governments contribute.

**COAL AND OIL-SHALE MINE WORKERS' SUPERANNUATION SCHEMES(a)**  
1966-67 TO 1970-71

	1966-67	1967-68	1968-69	1969-70	1970-71
Income—	\$'000	\$'000	\$'000	\$'000	\$'000
Contributions . . . . .	5,522	5,671	5,959	6,016	6,664
Interest, dividends, rent and other income	1,091	1,177	1,272	1,369	1,447
<b>Total income.</b> . . . .	<b>6,613</b>	<b>6,848</b>	<b>7,231</b>	<b>7,386</b>	<b>8,111</b>
Expenditure—					
Pensions and lump sum payments. .	5,348	5,471	5,289	5,953	7,360
Other . . . . .	141	149	170	176	210
<b>Total expenditure</b> . . . . .	<b>5,489</b>	<b>5,620</b>	<b>5,458</b>	<b>6,129</b>	<b>7,570</b>
Assets at end of year—					
Local government and semi-government securities. . . . .	20,051	21,530	22,943	23,791	24,227
Other assets . . . . .	1,282	1,084	1,285	1,698	1,884
<b>Total assets</b> . . . . .	<b>21,333</b>	<b>22,613</b>	<b>24,228</b>	<b>25,488</b>	<b>26,111</b>
Less Sundry creditors, statutory reserve funds, etc. . . . .	166	218	59	64	144
<b>Accumulated Funds</b> . . . . .	<b>21,167</b>	<b>22,395</b>	<b>24,168</b>	<b>25,425</b>	<b>25,967</b>
	No.	No.	No.	No.	No.
Number of contributions at end of year .	15,794	16,116	16,404	17,276	18,697
Number of pensioners at end of year .	11,852	11,884	11,505	11,648	11,770

(a) Operating in all States except South Australia.

**Private superannuation, pension and retiring allowance schemes**

In 1955-56, 1960-61, 1961-62 and 1962-63 the Bureau conducted sample surveys of pension and retiring allowance schemes in private businesses subject to pay-roll tax, other than in rural industries, private domestic service, and certain businesses such as accountants, trade associations, consultant engineers, etc. Commonwealth Government airlines and banks were included where they had established their own funds separately from the Commonwealth superannuation funds, but statutory coal miners' pension funds were excluded. Details were asked for three types of pension and retiring allowance schemes. They were (a) schemes operated through life insurance offices, (b) schemes operated through separately constituted funds, and (c) direct payments of pensions and retiring allowances.

The results of the 1955-56 survey are available in *Finance Bulletin* No. 47, Part I—*Public and Private Finance*, and the 1960-61, 1961-62 and 1962-63 survey results were published in *Insurance and Other Private Finance*, Bulletin No. 2 and Year Book No. 51 (pages 898-900).

For the years 1956-57 to 1958-59, 1963-64 and 1964-65, information was collected from a small number of the larger separately constituted funds. Although only a small number of funds was included in these collections they accounted, in 1962-63, for about 27 per cent of the income, 28 per cent of the expenditure and about 34 per cent of the total assets of the separately constituted funds covered by the more comprehensive sample survey conducted for 1962-63.

Information for these selected funds for the years 1955-56, 1960-61, 1961-62 and 1962-63 was extracted from the returns obtained in the sample surveys conducted for those years and results of the survey for 1964-65, together with comparative figures for previous years, were published in April 1966 in a mimeographed bulletin.

In order to improve the coverage of the published statistics of private pension funds, returns were collected from some additional funds for 1964-65 and tabulated with the returns from the survey for 1964-65 referred to above. The separately constituted private pension funds included in the enlarged 1964-65 survey together accounted, in 1962-63, for about 72 per cent of the total contributions, 71 per cent of the income, 68 per cent of the expenditure and 77 per cent of the assets of the separately constituted funds covered by the more comprehensive sample survey conducted for 1962-63. The results of the enlarged 1964-65 survey were published in September 1966 in a mimeographed bulletin.

Further surveys, relating to the same funds that were included in the enlarged 1964-65 survey of selected private pension funds, have been made in respect of each year from 1965-66 to 1970-71 inclusive. Since the *Survey of Selected Private Pension Funds* for 1970-71 is not a representative sample it is not known to what extent their share of the whole field has changed since the 1962-63 survey; nor is the pattern of income, expenditure and asset distribution of the large funds included in this survey necessarily representative of the whole field.

The statistics do not relate to uniform accounting periods but to the financial years of the funds which ended in the years shown.

#### SELECTED SEPARATELY CONSTITUTED PRIVATE PENSION FUNDS: INCOME AND EXPENDITURE, 1966-67 TO 1970-71

(\$ million)

INCOME									
		Employees' contributions	Employers' contributions	Interest on Cwlth local and semi-government securities	Other interest, dividends and rent	Profit from sale or revaluation of assets	Other income(a)	Total income	
1966-67	.	.	26.6	47.7	19.0	27.0	7.6	5.1	133.0
1967-68	.	.	29.4	52.7	20.3	30.8	16.1	6.2	155.6
1968-69	.	.	32.3	58.1	21.9	36.0	18.7	7.0	174.1
1969-70	.	.	36.2	68.1	23.6	41.5	5.0	3.4	177.8
1970-71	.	.	40.8	77.3	26.2	47.4	4.1	3.6	199.4

EXPENDITURE										
	Pensions paid			Lump sum payments To former employees			Loss on sale or revaluation of assets	Other expenditure (b)	Total expenditure	
	Ex-employees	Widows or children	Total	On retirement	On resignation or dismissal	To widows or children				
1966-67	.	13.6	2.2	15.8	10.3	9.7	2.6	0.9	7.6	46.9
1967-68	.	15.4	2.6	18.0	13.0	10.7	2.9	1.1	3.4	49.0
1968-69	.	17.0	3.1	20.1	14.7	12.7	3.4	1.6	3.4	55.9
1969-70	.	18.8	3.6	22.4	18.1	15.9	3.0	3.8	8.0	71.2
1970-71	.	21.4	4.0	25.4	22.5	16.8	3.7	7.2	5.6	81.3

(a) Includes receipts from life insurance offices, sub-underwriting commissions, etc. expenses payable from funds, payments to life insurance offices, etc.

(b) Includes administrative



SELECTED SEPARATELY CONSTITUTED PRIVATE PENSION FUNDS: ASSETS<sup>(a)</sup>  
1966-67 TO 1970-71

	Cash in hand or in bank	Cwth Govt securi- ties	Local and semi- govern- ment securi- ties	Loans on mortgage		Com- pany debentures, notes, and other loans to com- panies	Shares in com- panies	Land and build- ings	All other assets (b)	Total assets	Less sundry credi- tors, etc.	Amount of funds in Aus- tralia
				To com- panies	Other							
AMOUNT (\$ million)												
1966-67 .	19.4	137.3	188.9	42.1	22.0	209.4	228.7	6.8	14.9	869.5	4.3	865.1
1967-68 .	22.2	155.2	195.0	56.2	26.5	230.0	258.0	8.2	21.6	972.9	4.7	968.2
1968-69 .	23.9	171.3	202.1	70.7	31.1	256.8	299.7	11.4	20.6	1,087.5	6.8	1,080.7
1969-70 .	18.0	190.0	205.6	85.9	37.0	277.5	337.4	16.3	27.1	1,194.7	8.9	1,185.8
1970-71 .	23.5	222.7	203.8	102.2	37.0	303.1	362.1	25.2	32.5	1,312.1	9.0	1,303.1

## PERCENTAGE DISTRIBUTION

1966-67 .	2.2	15.8	21.7	4.8	2.5	24.1	26.4	0.8	1.7	100.0	0.5	99.5
1967-68 .	2.3	15.9	20.0	5.8	2.7	23.6	26.5	1.0	2.2	100.0	0.5	99.5
1968-69 .	2.2	15.8	18.6	6.5	2.9	23.6	27.5	1.0	1.9	100.0	0.6	99.4
1969-70 .	1.5	15.9	17.2	7.1	3.1	23.2	28.3	1.4	2.3	100.0	0.7	99.3
1970-71 .	1.8	17.1	15.5	7.8	2.8	23.1	27.5	1.9	2.5	100.0	0.7	99.3

(a) Book values at balance dates.  
to building societies.

(b) Includes loans to authorised dealers in the short-term money market and loans

## FINANCE COMPANIES

Information relating to the lending operations of finance companies in Australia is given in the following tables. A comprehensive account of the scope of these statistics and fuller details of the transactions of finance companies, together with definitions of the various categories of finance agreements and of the items of data given in the tables, are provided in the bulletin *Finance Companies*, 1970-71 and in the monthly statements *Finance Companies*. For the purposes of these statistics, finance companies are defined as companies which are engaged mainly in providing to the general public (businesses as well as persons in their private capacity) credit facilities of the following types: hire purchase and other instalment credit for retail sales, wholesale hire purchase, other consumer and commercial loans, and factoring. The finance companies covered in these statistics, insofar as they provide instalment credit for retail sales, are also included in the statistics of Instalment Credit for Retail Sales (see pages 520-1).

In general, companies which are engaged both in financing activities and other activities come within the scope of these statistics, provided that the major portion of their assets consists of financial assets of the types listed above and/or a major proportion of their income is derived from such assets. Companies are excluded if the major proportion of their balances outstanding consists of agreements written for the purpose of financing their own sales. Companies which are engaged mainly in financing, in any way, the operations of related companies ('related' as defined in the Companies Act) are also excluded from these statistics, as are unincorporated finance companies. Also excluded are the following classes of financial and quasi-financial institutions: banks; life insurance companies; fire, marine and general insurance companies; short-term money market dealers; pastoral finance companies; investment companies; unit trusts; land trusts; mutual funds and management companies for the foregoing trusts and funds; pension and superannuation funds; building and friendly societies; credit unions.

FINANCE COMPANIES: SUMMARY, AUSTRALIA, 1966-67 TO 1970-71  
(\$ million)

		Amount financed	Collections and other liquidations			Balances outstanding at end of year		
			Contracts including charges	Contracts excluding charges	All contracts	Contracts including charges	Contracts excluding charges	All contracts (a)
1966-67	.	2,303.0	1,163.9	1,359.6	2,523.5	1,630.2	481.0	2,111.2
1967-68	.	2,726.9	1,250.4	1,550.1	2,800.5	1,850.6	592.3	2,442.9
1968-69	.	3,241.1	1,418.4	1,913.8	3,332.2	2,105.5	716.3	2,821.7
1969-70	.	3,819.7	1,619.6	2,209.9	3,829.5	2,412.9	981.9	3,394.8
1970-71	.	4,289.8	1,795.0	2,597.0	4,392.0	2,778.1	1,201.4	3,979.5

(a) Amounts shown in this column are intended to provide a broad overall measure of total balances outstanding. However, movements in this series may be affected by changes in the proportions of the two components of the series to the total.

FINANCE COMPANIES: AMOUNT FINANCED, COLLECTIONS AND OTHER LIQUIDATIONS  
OF BALANCES, AND BALANCES OUTSTANDING BY TYPE OF AGREEMENT, 1966-67 TO 1970-71  
(\$ million)

	Instalment credit for retail sales	Wholesale finance	Commercial loans repayable at call or within 90 days	Other consumer and commercial loans			Factoring	Total all contracts
				Personal loans	Other loans			
					Including charges	Excluding charges		
AMOUNT FINANCED DURING YEAR								
1966-67	689.2	719.0	319.8	95.5	411.5		68.0	2,303.0
1967-68	816.1	855.8	371.1	116.9	492.2		74.9	2,726.9
1968-69	922.7	944.4	496.9	123.7	677.8		75.7	3,241.1
1969-70	1,045.8	1,059.7	566.5	143.9	912.0		91.6	3,819.7
1970-71	1,134.4	1,134.6	678.7	154.0	1,090.5		97.6	4,289.8

COLLECTIONS AND OTHER LIQUIDATIONS OF BALANCES DURING YEAR

1966-67	.	854.9	704.6	339.5	(a)	(b)308.9	(b)239.3	76.2	2,523.5
1967-68	.	913.0	836.6	351.7	(a)	(b)337.4	(b)278.5	83.3	2,800.5
1968-69	.	1,026.5	934.8	503.6	(a)	(b)391.9	(b)387.6	87.9	3,332.2
1969-70	.	1,161.3	1,053.1	539.6	(a)	(b)458.3	(b)513.7	103.6	3,829.5
1970-71	.	1,313.2	1,128.1	669.4	171.9	335.5	659.5	114.4	4,392.0

BALANCES OUTSTANDING AT END OF YEAR

1966-67	.	1,087.4	100.8	47.4	(a)	(b)542.8	(b)311.1	21.7	2,111.2
1967-68	.	1,222.0	127.6	64.8	(a)	(b)628.6	(b)376.4	23.6	2,442.9
1968-69	.	1,380.2	146.7	53.9	(a)	(b)725.2	(b)493.1	22.6	2,821.7
1969-70	.	1,575.7	167.6	77.9	(a)	(b)837.2	(b)709.6	26.9	3,394.8
1970-71	.	1,751.6	192.6	86.3	204.9	843.5	872.6	27.8	3,979.5

(a) Not available separately included in other loans, see footnote (b).

(b) Includes personal loans.

**FINANCE COMPANIES: LOANS TO RELATED  
NON-FINANCE COMPANIES, BALANCES OUT-  
STANDING, AUSTRALIA, 1966-67 TO 1970-71**

(\$ million)

<i>End of year—</i>	<i>Balances outstanding</i>
1966-67 . . . . .	14.6
1967-68 . . . . .	16.0
1968-69 . . . . .	15.9
1969-70 . . . . .	25.4
1970-71 . . . . .	20.0

**FINANCE COMPANIES: TRANSACTIONS IN BILLS OF EXCHANGE  
AUSTRALIA, 1966-67 TO 1970-71**

(\$ million)

	<i>Amounts paid for bills acquired during year</i>	<i>Amounts received for bills disposed of during year</i>	<i>Balances outstanding at end of year</i>
1966-67 . . . . .	38.7	36.9	4.3
1967-68 . . . . .	111.1	99.1	16.6
1968-69 . . . . .	122.4	122.4	17.8
1969-70 . . . . .	170.0	154.8	33.9
1970-71 . . . . .	262.2	251.9	45.5

**FINANCE COMPANIES: BUSINESS EQUIPMENT  
AND PLANT ON LEASE, INITIAL CAPITAL COST  
AND BALANCES OUTSTANDING, AUSTRALIA  
1966-67 TO 1970-71**

(\$ million)

	<i>Initial capital cost of goods newly leased during year</i>	<i>Balances outstanding at end of year</i>
1966-67 . . . . .	77.6	128.6
1967-68 . . . . .	125.3	191.1
1968-69 . . . . .	148.7	253.9
1969-70 . . . . .	207.5	345.9
1970-71 . . . . .	261.9	459.0

**FINANCE COMPANIES: INSTALMENT CREDIT FOR RETAIL SALES  
AMOUNT FINANCED, COLLECTIONS AND OTHER LIQUIDATIONS, AND BALANCES  
OUTSTANDING, AUSTRALIA, 1966-67 TO 1970-71**

(\$ million)

<i>Amount financed</i>					<i>Collections and other liquidations</i>			<i>Balances outstanding at end of year</i>	
<i>New motor vehicles</i>	<i>Used motor vehicles</i>	<i>Plant and machinery</i>	<i>Household and personal goods</i>	<i>Total</i>	<i>Cash collections</i>	<i>Other liquidations</i>	<i>Total</i>		
1966-67	254.9	262.1	51.3	120.8	689.2	823.4	31.5	854.9	1,087.4
1967-68	318.2	301.9	59.0	136.9	816.1	883.1	29.9	913.0	1,222.0
1968-69	352.1	350.0	78.0	142.6	922.7	988.3	38.2	1,026.5	1,380.2
1969-70	400.6	412.5	80.4	152.2	1,045.8	1,110.9	50.5	1,161.3	1,575.7
1970-71	426.5	471.6	67.8	168.5	1,134.4	1,237.3	75.9	1,313.2	1,751.6





INSTALMENT CREDIT FOR RETAIL SALES, BY TYPE OF CREDIT  
AMOUNT FINANCED, BY COMMODITY GROUP, AND  
BALANCES OUTSTANDING, AUSTRALIA, 1966-67 TO 1970-71  
(\$ million)

	<i>Amount financed during year</i>				<i>Balances outstanding at end of year</i>
	<i>Motor vehicles, etc.</i>	<i>Plant and machinery</i>	<i>Household and personal goods</i>	<i>Total</i>	
Hire purchase—					
1966-67 . . .	405.9	80.1	128.8	614.7	994.1
1967-68 . . .	431.2	84.3	133.9	649.3	1,026.4
1968-69 . . .	463.5	97.4	134.0	695.0	1,078.0
1969-70 . . .	526.1	93.7	135.6	755.4	1,159.3
1970-71 . . .	604.1	91.7	136.3	832.1	1,261.4
Other instalment credit—					
1966-67 . . .	156.0	7.2	209.6	372.8	448.8
1967-68 . . .	237.8	12.7	219.9	470.4	549.4
1968-69 . . .	291.5	21.1	227.5	540.1	655.2
1969-70 . . .	339.3	21.6	239.3	600.2	755.4
1970-71 . . .	342.9	13.2	257.9	614.0	828.3
Total instalment credit—					
1966-67 . . .	561.9	87.3	338.3	987.5	1,443.0
1967-68 . . .	669.0	97.0	353.8	1,119.8	1,575.8
1968-69 . . .	755.0	118.5	361.5	1,235.1	1,733.2
1969-70 . . .	865.4	115.3	374.8	1,355.5	1,914.7
1970-71 . . .	947.0	104.9	394.2	1,446.1	2,089.7

NEW HIRE PURCHASE AGREEMENTS: AVERAGE VALUE AND  
AMOUNT AND PROPORTION FINANCED, BY COMMODITY  
GROUP, AUSTRALIA, 1970-71

<i>Commodity group</i>	<i>Average value of goods purchased per agreement</i>	<i>Average amount financed per agreement</i>	<i>Average proportion financed</i>
	\$	\$	Per cent
Motor vehicles, tractors, etc. . . . .	2,102	1,469	70
Plant and machinery . . . . .	3,896	2,721	70
Household and personal goods . . . . .	215	179	83
All groups . . . . .	961	690	72

## PASTORAL FINANCE COMPANIES

PASTORAL FINANCE COMPANIES: RURAL ADVANCES  
AMOUNTS OUTSTANDING(a), JUNE 1967 TO 1971

(Source: Reserve Bank of Australia)

(\$ million)

End of June—	N.S.W.	Vic.	Qld	S.A.	W.A. and Tas.	Total
1967 . . .	68.4	50.2	58.8	50.1	57.9	285.5
1968 . . .	72.2	54.8	63.5	61.0	62.9	314.4
1969 . . .	77.6	65.9	62.6	70.2	61.5	337.7
1970 . . .	76.7	66.1	66.8	71.4	68.2	349.1
1971 . . .	70.8	57.2	69.6	73.7	61.7	333.0

(a) Compiled from returns supplied to the Reserve Bank by major pastoral finance companies. Advances are classified according to the location of the branch holding the advance, which in some cases may differ from the State of residence of the borrower.

## PASTORAL FINANCE COMPANIES: LIABILITIES AND ASSETS(a), JUNE 1967 TO 1971

(Source: Reserve Bank of Australia)

(\$ million)

## LIABILITIES

End of June—	Balances due to banks	Clients' credit balances	Debentures, notes and deposits		Other outside liabilities	Share- holders' funds	Overseas liabilities	Total liabili- ties/ assets
			Maturing within twelve months	Other				
1967 . . .	68.5	41.8	39.3	29.8	94.8	154.2	131.9	560.2
1968 . . .	94.4	34.4	51.9	40.0	89.9	162.5	133.2	606.1
1969 . . .	86.7	37.6	52.7	46.5	107.2	173.4	138.4	642.4
1970 . . .	95.1	34.7	70.6	52.1	113.6	181.1	152.5	699.6
1971 . . .	96.2	31.9	85.3	78.4	122.1	179.6	128.6	722.0

## ASSETS

End of June—	Cash and deposits with banks	Loans to author- ised money market dealers	Other short- term assets (b)	Cwlth Govt securi- ties	Advances and sundry debtors		Stocks	Fixed assets	Other assets
					Rural	Other			
1967 . . .	7.6	0.4	1.9	33.3	285.5	25.7	37.8	145.8	22.3
1968 . . .	8.6	1.7	1.3	35.7	314.4	29.9	40.4	148.4	25.7
1969 . . .	11.1	1.6	6.9	35.7	337.7	29.7	40.4	151.6	27.7
1970 . . .	7.9	1.2	17.5	32.6	349.1	36.9	42.5	176.5	35.3
1971 . . .	10.7	3.3	28.8	35.7	333.0	33.9	42.3	190.9	43.3

(a) Compiled from returns supplied to the Reserve Bank by major pastoral finance companies. (b) Excludes Commonwealth Government securities.

## RURAL DEBT

Major sources of credit for rural purposes include banks, Commonwealth and State government financial agencies, pastoral finance companies, and life insurance companies. The following table shows the estimated rural debt to these lenders.

## ESTIMATED RURAL DEBT TO SPECIFIED LENDERS, 30 JUNE 1967 TO 1971

(Source: Reserve Bank of Australia)

(\$ million)

Lender	30 June—				
	1967	1968	1969	1970	1971
Major trading banks . . . .	751	918	939	998	994
Ex-service settlement . . . .	92	88	83	80	78
Other government, including State banks and State savings banks .	261	297	317	(a)351	372
Pastoral finance companies . . .	285	314	338	349	333
Commonwealth Development Bank	120	143	162	176	192
Life insurance companies . . . .	81	97	113	128	129
<b>Total . . . . .</b>	<b>1,590</b>	<b>1,857</b>	<b>1,952</b>	<b>2,082</b>	<b>2,098</b>

(a) Reserve Bank estimate.

In addition, credit is supplied to the rural sector by finance companies, merchants, co-operative producer organisations, and by private lenders and investors, the most noteworthy of these last-mentioned sources involving family arrangements and property vendors. No data are currently available on the extent of the outstanding debt by the rural sector to these sources.

## NEW CAPITAL RAISINGS BY COMPANIES IN AUSTRALIA

Information relating to capital raised by companies in Australia is given in the following tables. More detailed information may be found in the annual bulletin *Insurance and Other Private Finance* and in quarterly bulletins dealing with capital raisings (see beginning of chapter).

The statistics relate to capital raised by companies through issues of shares, and in the case of companies listed on stock exchanges, through the issue of debentures, notes and similar securities and the acceptance of deposits, and in the case of unlisted companies, by way of loans secured over the entire assets of the company. Capital obtained by way of bank overdraft or bank loans, trade credit, temporary advances, and loans secured over part only of the assets of the company is not included. Totally unsecured loans are included in the case of listed companies, but are excluded in the case of unlisted companies.

Separate statistics are given for listed and unlisted companies. Listed companies are companies incorporated in Australia or Papua New Guinea and listed on one or more of the Australian stock exchanges. All other companies incorporated in Australia (excluding its overseas territories), including subsidiaries of listed companies, are classified as unlisted companies. Companies incorporated overseas, whether listed on an Australian stock exchange or not, are excluded from the statistics of share issues. However, subsidiaries of overseas companies, if incorporated in Australia, are included in the statistics of share issues. The statistics of new capital raised through issues of debentures, notes, etc., and the acceptance of deposits, include, in addition to capital raised by companies incorporated in Australia (including subsidiaries of overseas companies), capital raised in this way from Australian sources by overseas public companies through their Australian offices. Where an issue is made at the same time on Australian and overseas markets, that part of the issue which is taken up through overseas brokers is excluded.

The following are explanatory notes relating to some of the items shown in the tables.

*New money*

This is the net amount of cash transferred from the 'investing public' to the 'company sector'. For this purpose the 'investing public' is defined to include all non-company subscribers, Australian life insurance companies and Australian government and private superannuation funds. Subscriptions

by overseas banks, overseas life insurance companies and overseas superannuation funds, are excluded. In practice, it is necessary to include in 'new money', most subscriptions by companies holding less than five per cent of the ordinary shares of an issuing company as it is not practicable to separately identify all such subscriptions. However, where large subscriptions by companies holding less than five per cent of the ordinary shares in the issuing company are identified they are not included in 'new money'.

*Amount not involving new money.* This amount includes cash subscriptions received by issuing companies from associated companies. Such subscriptions represent inter-company transfers only, and do not involve a receipt of funds from the 'investing public'. Also included are amounts which, although subscribed by the 'investing public' (i.e. subscribers other than 'associated companies'), are not retained by the issuing company or its associates, but are used to redeem shares, debentures or unsecured notes, etc., or are used to purchase from individuals existing shares, debentures, etc., in other companies, including existing shares, etc., in associated and subsidiary companies. The funds used in this way are thus returned to another section of the 'investing public' and do not represent a *net* transfer of cash from the 'investing public' to the companies. (Besides these purchases of existing shares, etc., from individuals, purchases of existing shares, etc., from companies other than associates of the issuing company might also be included in this item, but the amounts involved are small and separate details have not been collected.) In the tables which follow, the 'amount not involving new money' is obtained by deducting from the total cash raised the amount of 'new money'.

**LISTED COMPANIES: NEW CAPITAL RAISED THROUGH ISSUES OF SHARES  
DEBENTURES, OR REGISTERED NOTES, ETC.(a), OR ACCEPTING  
DEPOSITS(b), 1966-67 TO 1970-71**

(\$ million)

Share capital						Debentures, registered notes and deposits			
	Value of issues commenced	Non-cash issues commenced (c)	Cash issues commenced	Cash raised during period (d)	Amount not involving new money	New money	Total amount raised (e)	Amount not involving new money (e)	New money
1966-67 . . .	313.7	148.0	165.8	151.6	39.2	112.4	1,099.3	898.9	200.4
1967-68 . . .	281.0	79.3	201.8	170.1	47.2	122.9	1,393.9	1,045.2	348.7
1968-69 . . .	927.2	209.9	717.3	482.2	143.7	338.5	1,874.5	1,426.3	448.3
1969-70 . . .	1,070.0	282.8	787.2	664.5	207.6	456.8	2,567.2	2,085.7	481.5
1970-71 . . .	983.7	442.7	541.0	450.6	92.8	357.7	3,187.5	2,675.2	512.3

(a) Includes convertible notes. (b) Deposits accepted by banks, life insurance companies, pastoral companies and building societies, and loans to authorised dealers in the short-term money market are not included. (c) Includes bonus issues, conversion issues, issues in exchange for existing shares, etc. (d) Amounts paid up on issues commenced during the year plus calls on issues commenced in earlier years. (e) Includes conversions, renewals, etc.

**UNLISTED COMPANIES: NEW CAPITAL RAISED THROUGH ISSUE OF  
SHARES AND LOANS SECURED BY CHARGES OVER THE COMPANIES'  
ENTIRE ASSETS, 1966-67 TO 1970-71**

(\$ million)

Share capital						Loans secured by charges over the companies' entire assets			
	Value of issues commenced(a)	Non-cash issues commenced (b)	Cash issues commenced	Cash raised during period (c)	Amount not involving new money	New money	Total amount raised (d)	Amount not involving new money (d)	New money
1966-67	392.7	178.8	214.0	150.6	110.2	40.4	74.3	37.9	36.4
1967-68	400.1	190.9	209.1	209.2	158.4	50.8	66.3	48.2	18.1
1968-69	718.8	343.8	375.3	299.0	230.5	68.4	95.3	62.8	32.5
1969-70	710.2	290.9	419.3	354.7	275.1	79.5	95.0	75.4	19.6
1970-71	696.1	221.8	474.3	430.4	364.7	65.8	85.1	66.5	18.6

(a) From 1970-71, issues with a nominal value of \$200 or less are excluded. (b) Includes bonus issues, conversion issues, issues in exchange for existing shares, etc. (c) Amounts paid up on issues commenced during year plus calls on issues commenced in previous years. (d) Includes conversion, renewals, etc.



LISTED AND UNLISTED COMPANIES: NEW MONEY RAISED, BY INDUSTRY  
GROUP, 1966-67 TO 1970-71  
(\$ million)

	<i>Companies listed on stock exchanges</i>			<i>Companies not listed on stock exchanges</i>			<i>Grand total</i>
	<i>Share capital(a)</i>	<i>Debentures registered notes and deposits(b)</i>	<i>Total</i>	<i>Share capital(a)</i>	<i>Secured loans(c)</i>	<i>Total</i>	
Manufacturing—							
1966-67 . . .	28.3	101.7	130.0	8.8	15.7	24.5	154.5
1967-68 . . .	24.7	82.4	107.1	12.7	7.8	20.5	127.6
1968-69 . . .	92.9	68.3	161.2	14.4	6.3	20.7	181.9
1969-70 . . .	122.9	56.2	179.1	12.7	3.3	16.0	195.1
1970-71 . . .	71.2	32.7	103.9	12.0	0.7	12.7	116.6
Finance and property(b)—							
1966-67 . . .	4.7	94.9	99.6	6.4	7.4	13.8	113.4
1967-68 . . .	15.6	255.4	271.0	8.1	6.2	14.3	285.3
1968-69 . . .	45.9	338.1	384.0	18.9	6.4	25.3	409.3
1969-70 . . .	36.7	366.7	403.4	20.9	10.2	31.1	434.5
1970-71 . . .	35.5	422.4	457.9	11.6	9.2	20.8	478.7
Commerce—							
1966-67 . . .	32.1	(d) -0.7	31.4	8.5	0.7	9.2	40.6
1967-68 . . .	7.9	4.3	12.2	8.9	0.8	9.7	21.9
1968-69 . . .	18.4	30.7	49.1	10.1	2.3	12.4	61.5
1969-70 . . .	8.9	13.8	22.7	8.4	0.9	9.3	32.0
1970-71 . . .	5.1	29.3	34.4	5.2	0.8	6.0	40.4
Other industries—							
1966-67 . . .	47.2	4.6	51.8	13.7	12.7	26.4	78.2
1967-68 . . .	75.0	6.6	81.6	17.6	3.4	21.0	102.6
1968-69 . . .	181.5	11.2	192.7	21.5	17.3	38.8	231.5
1969-70 . . .	288.4	44.8	333.2	33.0	5.3	38.3	371.5
1970-71 . . .	245.8	27.9	273.7	30.7	8.2	38.9	312.6
All industries—				(e)		(e)	(e)
1966-67 . . .	112.4	200.4	312.8	40.4	36.4	76.8	389.6
1967-68 . . .	122.9	348.7	471.6	50.8	18.1	68.9	540.5
1968-69 . . .	338.5	448.3	786.8	68.4	32.5	100.9	887.7
1969-70 . . .	456.8	481.5	938.3	79.5	19.6	99.1	1,037.4
1970-71 . . .	357.7	512.3	870.0	65.8	18.7	84.5	954.5

(a) Includes preference shares. (b) Excludes deposits accepted by banks, insurance companies, pastoral companies and building societies, and loans to authorised dealers in the short-term money market. (c) Includes only loans which are secured by charges over the companies' entire assets. (d) Excess of repayments over receipts of new money. (e) Up to 1969-70, the industry figures for unlisted companies exclude share issues with a nominal value of \$2,000 or less, but such issues are included in the All Industries figures. From 1970-71 the industry figures for unlisted companies exclude issues with a nominal value of \$10,000 or less, and issues with a nominal value of \$200 or less are excluded from the All Industries figures.

## SHORT-TERM MONEY MARKET

For some years prior to 1959 leading stockbrokers had been actively engaged in the acceptance of short-term funds against the security of government securities, but their operations were limited by the absence of suitable short-term securities and their liquidity requirements. In February 1959 the Commonwealth Bank (now the Reserve Bank) gave official status to the market by announcing that under certain conditions it would act as lender of last resort to authorised dealers in the short-term money market.

The form of organisation consists of nine companies whose functions are:

- (i) to accept loans overnight, at call or for fixed periods, in minimum amounts of \$50,000 and to invest these funds in money market securities.
- (ii) to engage as traders in the buying and selling of money market securities.

The types of securities that may be used as money market securities are subject to the approval of the Reserve Bank. At present they comprise Commonwealth Government securities maturing within five years, commercial bills of any maturity that have been accepted or endorsed by a trading bank, banks' certificates of deposit maturing within five years, and non-bank commercial bills maturing within 180 days.

Dealers are required to have a minimum paid up capital of \$400,000 and there is a limit on the maximum ratio of loans to shareholders' funds.

Under the lender of last resort arrangements dealers may borrow from the Reserve Bank for a minimum of seven days and at a high rate of interest against the lodgment of Commonwealth Government securities.

# SHORT-TERM MONEY MARKET: SELECTED LIABILITIES AND ASSETS AND INTEREST RATES OF AUTHORISED DEALERS, JUNE 1967 TO 1971

(Source: Reserve Bank of Australia)

Month	Liabilities to clients			Holdings of Cwlth Govt securities (at face value)	Com-mercial bills	Bank's certi-ficates of deposit	Interest rates on loans accepted during month				Weighted average interest rate on loans out-standing (a)
	All trading banks	Other clients	Total				At call		For fixed periods		
							Mini-mum per cent per annum	Maxi-mum per cent per annum	Mini-mum per cent per annum	Maxi-mum per cent per annum	
Average of weekly figures—(\$ million)											
June—											
1967 .	88.8	367.6	456.4	467.7	32.8	..	2.00	6.50	3.00	5.50	4.46
1968 .	87.7	406.5	494.2	491.3	35.7	..	3.00	7.75	3.75	5.40	4.29
1969 .	94.9	398.7	493.6	505.6	28.9	15.0	2.00	7.50	4.00	6.75	4.59
1970 .	102.8	464.2	567.0	575.4	38.3	3.6	3.50	8.80	4.50	8.50	6.12
1971 .	142.0	555.2	697.2	682.0	45.4	3.4	2.00	9.50	4.00	8.00	5.91

(a) Average of weekly figures.

# SHORT-TERM MONEY MARKET: AUTHORISED DEALERS' LIABILITIES BY TYPE OF CLIENT(a), 30 JUNE 1967 TO 1971

(Source: Reserve Bank of Australia)

(\$ million)

Client	30 June—				
	1967	1968	1969	1970	1971
All trading banks	121.5	17.6	90.0	158.4	189.2
Savings banks	56.2	26.5	36.0	37.3	77.7
Insurance offices	10.8	20.1	32.4	24.4	26.8
Superannuation, pension and provident funds	11.7	4.6	8.9	16.6	22.4
Hire purchase and other instalment credit companies	5.9	2.8	2.4	7.9	6.1
Companies, n.e.i.	120.2	156.8	140.3	143.7	155.3
Commonwealth and State Governments	57.4	78.1	62.3	47.7	91.9
Local government and semi-government authorities, n.e.i.	56.5	72.2	75.3	87.7	70.0
All other lenders(b)	33.6	20.6	45.9	36.2	41.5
<b>Total</b>	<b>473.7</b>	<b>499.3</b>	<b>493.4</b>	<b>559.9</b>	<b>680.8</b>

(a) Compiled from returns supplied by authorised dealers in the short-term money market. Liabilities to Reserve Bank as lender of last resort are excluded. (b) Includes marketing boards and trustee companies.

## UNIT TRUSTS, LAND TRUSTS AND MUTUAL FUNDS

Statistics of operations of unit trusts, land trusts and mutual funds for the years 1966-67 to 1970-71 are shown below. Details of superannuation funds conducted by unit trust management companies are not included in these tables.

TRUSTS AND FUNDS: TOTAL MARKET VALUE AND TRANSACTIONS  
YEARS 1966-67 TO 1970-71  
(\$ million)

		Total market value at end of period(a)	Cash transactions— trust units and fund shares		Purchases and sales of investments(b)	
			Total amount received(c)	Total amount paid(d)	Purchases (e)	Sales (f)
1966-67	.	221.6	20.2	21.0	20.5	17.6
1967-68	.	263.4	30.9	35.1	33.0	40.8
1968-69	.	270.2	41.6	42.0	48.2	54.6
1969-70	.	286.1	59.0	32.3	61.1	50.8
1970-71	.	279.6	56.5	39.3	74.5	51.5

(a) Includes value of land trusts at valuation. (b) Commonwealth Government, local authority and semi-government securities, shares, debentures, unsecured notes, loans, deposits on term or notice of three months or longer, land and buildings, etc. (c) For trust units and fund shares issued. Includes re-issues and new issues. Includes fees and expenses. (d) For trust units and fund shares repurchased. Includes those units and fund shares intended for re-issue. (e) Payments for assets acquired during period. Includes brokerage and stamp duty. (f) Receipts for assets sold or redeemed during period. Excludes brokerage and stamp duty.

TRUSTS AND FUNDS: ANALYSIS OF PURCHASES AND SALES OF  
INVESTMENTS, 1966-67 TO 1970-71  
(\$ million)

		Shares (incl. preference shares)	Debentures, unsecured notes, deposits (a)	Cwlth Govt, local and semi-govt authority securities	Other(b)	Total
Purchases—						
1966-67	.	7.6	5.3	..	7.6	20.5
1967-68	.	13.2	7.3	..	12.4	33.0
1968-69	.	17.0	11.6	0.1	19.6	48.2
1969-70	.	35.3	10.6	0.1	15.1	61.1
1970-71	.	39.2	10.6	..	24.6	74.5
Sales—						
1966-67	.	13.7	3.0	0.1	0.8	17.6
1967-68	.	34.7	3.8	..	2.3	40.8
1968-69	.	44.0	5.5	..	5.0	54.6
1969-70	.	37.9	6.4	0.1	6.4	50.8
1970-71	.	35.8	8.3	..	7.4	51.5

(a) Excludes cash on hand and at bank, loans to authorised dealers in the short-term money market, and other deposits under three months' term or notice. (b) Includes land and buildings, mortgages on land and buildings, and other investments.

## REGISTERED BUILDING SOCIETIES

## Permanent and terminating building societies

REGISTERED BUILDING SOCIETIES: SELECTED ITEMS(a)  
AUSTRALIA, 1965-66 TO 1969-70

<i>Societies making returns</i>				<i>Share- holders</i>	<i>Loans paid over</i>	<i>Adminis- trative expenses</i>
<i>Permanent</i>	<i>Terminating (b)</i>	<i>Total</i>				
No.	No.	No.	No.		\$'000	\$'000
1965-66 . . .	132	3,641	3,773	371,675	164,828	9,506
1966-67 . . .	144	4,058	4,202	402,557	194,653	11,154
1967-68 . . .	161	4,388	4,549	458,881	260,011	13,060
1968-69 . . .	173	4,641	4,814	535,173	331,850	16,503
1969-70 . . .	182	4,882	5,064	669,339	444,263	21,499

(a) At various balance dates within the financial year shown. (b) Co-operative housing and other terminating societies.

REGISTERED BUILDING SOCIETIES: LIABILITIES AND ASSETS(a)  
AUSTRALIA, 1965-66 TO 1969-70

(\$ '000)

<i>Liabilities</i>						<i>Assets</i>			
<i>Investing members' funds</i>	<i>Borrowing members' funds</i>	<i>Deposits</i>	<i>Loans due to govern- ments</i>	<i>Other liabilities</i>	<i>Total liabilities</i>	<i>Advances on morti- gages(b)</i>	<i>Other assets</i>	<i>Total assets</i>	
1965-66 . . .	233,432	162,261	48,396	196,215	398,099	1,038,402	995,381	43,021	1,038,402
1966-67 . . .	291,766	175,243	55,529	225,399	417,509	1,165,446	1,111,354	54,092	1,165,446
1967-68 . . .	394,806	178,242	72,395	257,638	441,742	1,344,823	1,266,294	78,528	1,344,823
1968-69 . . .	548,619	185,623	126,114	283,716	454,129	1,598,204	1,490,259	107,945	1,598,204
1969-70 . . .	811,304	174,461	157,109	312,909	474,602	1,930,385	1,775,019	155,366	1,930,385

(a) At various balance dates within the financial year shown. (b) Includes advances on mortgages of terminating societies which are mainly on a gross basis. Net advances may be derived by subtracting 'Borrowing members' funds'.

## Permanent building societies

The following statistics summarise information obtained from a monthly collection introduced in May 1969 and relate to the operations of permanent building societies in all States and the Australian Capital Territory.

## PERMANENT BUILDING SOCIETIES: 1968-69 TO 1970-71

(\$'000)

						<i>Borrowings by societies— amount owing at end of year(d)</i>
<i>Loans approved during year(a)</i>	<i>Loans advanced during year(b)</i>	<i>Loans approved but not advanced at end of year(c)</i>	<i>Principal owing on mortgages at end of year</i>	<i>Paid-up share- capital at end of year</i>		
1968-69 . . .	n.a.	n.a.	75,871	707,085	552,795	221,695
1969-70 . . .	378,433	375,337	57,930	993,462	799,184	277,379
1970-71 . . .	427,067	368,068	99,042	1,245,677	1,117,818	321,649

(a) Includes loans approved for flats and home units, supplementary loans approved to complete the original purchase or construction of a house, flat or home unit and second mortgage loans approved. (b) Includes capitalised mortgage insurance premiums and other capitalised charges. (c) Excludes cancellations of loan approvals. (d) Includes deposits with societies, advances under Commonwealth and State Housing Agreements but excludes unsecured borrowings from banks.



## FRIENDLY SOCIETIES AND CO-OPERATIVE SOCIETIES

## Friendly societies

In 1970 the total membership of friendly societies in Australia was about 431,000, but as certain benefits such as medical attendance and free medicines, and in many cases funeral expenses, are granted to members' families as well as to members themselves, this figure must be more than doubled to arrive at an estimate of the number of persons who receive some direct benefit from these societies, even when due allowances are made for young and unmarried members. Legislation has conferred certain privileges on friendly societies, but, on the other hand, it insists on their registration, and it is the duty of the Registrars in the various States, prior to registering a new society, to see that its proposed rules conform to the law, and that the scale of contribution is sufficient to provide the promised benefits. Societies are obliged to forward to the Registrar annual returns about their membership and their finances, and reports dealing with the returns received are published in most of the States.

## FRIENDLY SOCIETIES(a): SUMMARY, STATES, 1969-70

	N.S.W.(b)	Vic.	Qld	S.A.	W.A.	Tas.(c)	Total
Registered societies . . . .	39	122	17	14	11	9	212
Branches . . . . .	1,663	1,086	395	481	246	112	3,983
Benefit members at end of year .	146,344	151,187	63,149	50,796	15,175	4,816	431,467
Average benefit members during year . . . . .	141,191	152,389	63,264	50,838	15,320	4,849	427,851
Members who received sick pay .	n.a.	24,069	5,505	7,503	2,158	719	n.a.
Total weeks sick pay granted .	n.a.	364,766	99,409	145,899	50,580	15,320	n.a.
Average weeks per member sick .	n.a.	15.2	18.1	19.4	23.4	21.3	n.a.
Deaths of benefit members . .	n.a.	2,405	1,122	1,114	358	218	n.a.
Proportion of deaths per 1,000 members (average) . . . .	n.a.	15.8	17.7	21.9	23.6	58.4	n.a.
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Revenue—							
Entrance fees, levies and members' contributions .	19,494	17,500	3,689	12,547	2,756	59	56,046
Interest, dividends and rents .	1,514	2,562	494	938	178	82	5,768
All other revenue . . . .	801	584	956	996	73	23	3,433
Total revenue . . . . .	21,808	20,646	5,140	14,481	3,008	164	65,247
Expenditure—							
Sick pay . . . . .	551	591	120	183	39	18	1,503
Medical attendance and medicine	16,115	11,696	3,583	11,175	2,521	2	45,092
Sums payable at death . . .	607	248	350	153	44	47	1,449
Administration . . . . .	3,226	3,448	795	{ 1,260 543	202 134	37 33	11,300
All other expenditure . . .	430	1,193					
Total expenditure . . . .	20,928	17,177	4,848	13,314	2,940	137	59,344
Total funds . . . . .	31,773	45,840	10,738	19,355	4,095	1,415	113,215

(a) Excludes juvenile branches, dispensaries, medical institutes, and certain miscellaneous societies. Receipts and payments of subsidy under the Commonwealth medical and hospital benefit schemes are excluded. (b) Includes the Australian Capital Territory. (c) Year ended 31 December 1970.

## Co-operative societies

Co-operative societies are divided into three classes: (i) those engaged in the manufacture and marketing of primary products and trade requirements; (ii) those engaged in retailing general household requirements; and (iii) those engaged in activities covered by both classes (i) and (ii). The first class may be described briefly as producers' co-operative societies and the second as consumers' co-operative societies. The particulars given for New South Wales relate to societies registered under the Co-operation Act, 1923-1967. A summary of the business of all co-operative societies for the year 1969-70 for all States is given in the following table. Separate particulars for each of the three types of co-operative societies are given in the annual bulletin *Insurance and Other Private Finance*, and issue No. 7, 1969-70 contains details for 1967-68 and 1968-69.

## CO-OPERATIVE SOCIETIES: STATES, 1969-70

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
Societies . . . No.	352	155	593	64	67	17	1,248
Members . . . No.	364,995	150,232	156,233	123,574	65,500	6,391	866,925
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Income—							
Gross turnover (sales) .	361,439	153,956	183,715	61,518	79,383	10,451	850,462
Other income . . .	3,113	6,599	12,446	4,621	21,086	1,306	49,172
Total income . .	364,552	160,555	196,161	66,139	100,470	11,757	899,634
Expenditure—							
Other purchases . . }	356,127	115,380	136,982	46,260	70,828	8,832	872,302
Other expenditure . . }		38,035	49,444	18,229	29,486	2,698	
Total expenditure . .	356,127	153,416	186,426	64,489	100,315	11,530	872,302
Rebates and bonuses . .	5,110	1,746	3,272	2,442	3,439	n.a.	n.a.
Dividends on share capital	1,752	1,435	599	472	814	56	5,128
Liabilities—							
Paid-up capital . . .	40,927	25,045	28,827	8,771	12,684	1,224	177,477
Bank overdrafts . . .	52,543	16,624	20,239	5,268	13,731	(a)	(a)
Accumulated profits . . }	25,908	3,028	7,585	1,350	87	619	114,575
Reserve funds . . . }		24,115	31,571	8,268	11,413	631	
Loan capital . . . }		9,539	22,079	15,147	53,020	(a)	
Sundry creditors . . }	60,042	21,305	28,618	4,605	13,275	2,012	(a)
Other liabilities . . . }		4,789	17,249	10,855	3,136	267	
Total liabilities . .	179,420	104,445	156,167	54,264	107,347	6,983	608,625
Assets—							
Land and buildings . . }	76,474	49,178	76,739	12,636	8,318	1,465	290,597
Machinery, plant and other fixed assets . . }				8,587	56,523	679	
Stocks . . . . .	54,796	15,442	13,968	14,304	8,792	1,236	108,538
Sundry debtors . . .	36,155	28,826	54,919	8,261	25,918	2,527	156,607
Cash in hand and on deposit . . . }	11,995	2,669	4,104	1,546	1,987	177	52,883
Profit and loss account . . }		3,425	720	342	176		
Other assets . . . }		4,906	5,716	8,588	5,633	899	
Total assets . . .	179,420	104,445	156,167	54,264	107,347	6,983	608,625

(a) Not available for publication, included in total liabilities.

# LOTTERIES AND BETTING

## Lotteries

The State Governments of New South Wales, Queensland, South Australia and Western Australia operate lotteries in their own States. Tattersall Sweep Consultations are operated under government licence in Victoria and also sell tickets under government licence in Tasmania and New Zealand. Tickets for any of these lotteries may also be sold in the Northern Territory and the Australian Capital Territory. The statistics of sales of tickets and prizes include the sales and allotments of prizes in New Zealand, Tasmania, the Northern Territory and the Australian Capital Territory. In general, revenue derived by the State Governments from these lotteries is used directly or indirectly to provide funds for expenditure on hospitals, charities, etc.

### LOTTERIES: VALUE OF TICKET SALES, PRIZES ALLOTTED, TAXES PAID AND OTHER NET CONTRIBUTIONS TO STATE GOVERNMENT REVENUES 1966-67 TO 1970-71 (S'000)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Total</i>
TICKET SALES						
1966-67 . . .	50,171	20,300	14,620	500	4,775	90,366
1967-68 . . .	50,528	19,420	15,900	5,200	4,350	95,398
1968-69 . . .	53,335	19,440	16,680	5,350	5,150	99,955
1969-70 . . .	55,645	21,400	17,600	5,700	6,200	106,545
1970-71 . . .	58,057	21,360	18,560	6,000	6,250	110,227
PRIZES ALLOTTED						
1966-67 . . .	30,904	12,180	9,332	300	2,803	55,520
1967-68 . . .	30,850	11,652	10,151	3,129	2,493	58,275
1968-69 . . .	32,843	11,664	10,651	3,241	3,001	61,400
1969-70 . . .	34,052	12,840	11,237	3,460	3,757	65,346
1970-71 . . .	35,815	12,816	11,850	3,648	3,803	67,931
TAXES PAID AND OTHER NET CONTRIBUTIONS TO STATE GOVERNMENT REVENUES(a)						
1966-67 . . .	11,892	6,296	3,710	50	1,317	23,265
1967-68 . . .	11,809	6,020	4,006	1,726	1,236	24,798
1968-69 . . .	12,202	6,026	4,160	1,633	1,437	25,458
1969-70 . . .	12,712	6,634	4,358	1,927	1,643	27,274
1970-71 . . .	13,127	6,622	4,492	1,833	1,594	27,667

(a) Includes grants to Tasmanian and New Zealand governments by Tattersall Sweep Consultations, Victoria.

### Betting

#### TOTALISATOR INVESTMENTS AND INVESTMENTS WITH LICENSED BOOKMAKERS STATES AND AUSTRALIAN CAPITAL TERRITORY, 1966-67 TO 1970-71 (\$'000)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(a)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>	<i>Total</i>
TOTALISATOR INVESTMENTS								
1966-67	146,084	179,490	47,339	7,207	43,077	1,174	2,567	426,938
1967-68	196,120	200,253	55,330	20,030	46,180	1,277	3,098	522,288
1968-69	241,350	224,955	61,003	26,292	52,938	1,145	4,215	611,897
1969-70	292,442	245,993	81,771	31,679	60,913	1,250	7,092	721,141
1970-71	337,492	273,638	94,534	31,466	67,652	1,322	8,808	814,914
INVESTMENTS WITH LICENSED BOOKMAKERS(b)								
1966-67	283,346	168,381	123,506	55,740	24,817	35,091	4,098	694,979
1967-68	283,262	172,603	131,145	49,189	27,332	42,090	3,919	709,540
1968-69	282,497	172,388	141,167	50,263	32,189	41,705	4,127	724,335
1969-70	310,881	183,296	145,837	58,165	38,972	44,899	4,713	786,763
1970-71	314,658	196,166	147,931	60,728	39,778	48,825	5,232	813,318

(a) Totalisator Agency Board commenced operating on 29 March 1967.  
licensed bookmakers in all States except Australian Capital Territory.

(b) Estimated from taxes on betting with

### PROBATES AND LETTERS OF ADMINISTRATION

The following table gives some particulars of the number and value of estates of deceased persons in each State for the latest year for which information is available. Owing to differences in legislation in the various States the figures are not entirely comparable.

#### PROBATES AND LETTERS OF ADMINISTRATION: STATES

	<i>N.S.W.</i> 1970-71(a)	<i>Vic.</i> 1970	<i>Qld</i> 1970-71	<i>S.A.</i> 1970	<i>W.A.</i> 1970-71(b)	<i>Tas.</i> 1970(c)
Estates . . . . . No.	28,194	22,287	9,596	4,972	5,757	1,795
Gross value . . . . \$'000	n.a.	470,722	160,457	86,110	n.a.	36,624
Net value . . . . . \$'000	504,634	423,675	146,526	79,052	75,938	34,474

(a) Total estates of deceased persons assessed for death duty.  
(c) Estates dealt with by the Taxation Department.

(b) Net value includes duty-free bequests of \$713,996.



## AUSTRALIAN INDUSTRY DEVELOPMENT CORPORATION

The Australian Industry Development Corporation was established by the *Australian Industry Development Corporation Act 1970* and commenced operations on 1 February 1971. Within the objectives and broad policy guidelines defined in the Act the Corporation operates an independent commercial enterprise governed by its own Board of Directors. It is not subject to direction by or on behalf of the Commonwealth.

The Corporation has a capital of \$100 million, to be subscribed by the Commonwealth in instalments but the whole being available if required to meet obligations. The paid-up capital at 31 July 1972 was \$50 million.

The central objectives of the Corporation are to promote the development of industries in Australia and support local participation in the ownership and control of industries and resources. Consistent with these objectives and the principle that A.I.D.C. must operate on a commercial basis and assist only in ventures which can demonstrate sound prospects, the Corporation provides finance, obtained principally by overseas borrowings, for essentially Australian-owned firms (including local firms with foreign partners) engaged in new development or expansion in the manufacturing, processing and mining industries.

The Corporation's financial participation in a venture is governed by the prevailing terms and conditions under which it can itself obtain loan finance. The capital of the Corporation is provided as a base for its borrowings and is not directly used for assistance to industry projects.

The Corporation participates in the financing of a development only at the invitation of the enterprise concerned and in the manner dictated by the needs of the project. Its assistance may be given in a variety of ways, such as loan investments or guarantees, or by temporarily taking a minority equity position.

A.I.D.C.'s first financial commitment to an industry development venture took effect on 1 July 1971, and by the end of its first full year of operations the Corporation had undertaken financial commitments of one kind or another totalling some \$53.7 million in respect of twenty-six industry development ventures.



## CHAPTER 18

### PUBLIC FINANCE

This chapter deals with the financial activities of the organisations which make up the three levels of government in the Australian political system—Commonwealth, State and Local—and which collectively constitute the public sector. The chapter is organised into six main groupings of topics. An account is given of the activities of each level of government, with particular emphasis being given to Commonwealth authorities. Tables are then presented which bring together the transactions of all public authorities to highlight the role of the public sector as a whole in the Australian economy. Then follows a section on government borrowing activities at all levels; and a section which looks at some major groups of State authorities that have been created to provide specific services, such as roads, water supply, etc.

For further detailed information on the subjects covered by this chapter *see* the annual bulletins published by this Bureau: *Australian National Accounts—National Income and Expenditure* (7.1); *Public Authority Finance* (5.33); *Public Authority Finance—Commonwealth Authorities* (5.12); and *Commonwealth Taxation Assessments* (5.29). Additional information may be found in the mimeographed bulletins *Public Authority Finance—State and Local Authorities* (5.43) and *Public Authority Finance—Taxation* (5.30). Current information in summarised form is given in *Quarterly Estimates of National Income and Expenditure* (7.5), and is also contained in *Quarterly Summary of Australian Statistics* (1.3), the *Monthly Review of Business Statistics* (1.4), and the *Monthly Digest of Current Economic Statistics* (1.5).

Additional details of the transactions of public authorities engaged in particular fields of activity, such as defence, transport and communication, health and welfare, education, etc. may be found in other chapters of this Year Book.

### COMMONWEALTH FINANCE

#### Financial provisions of the Constitution

The main provisions of the Constitution relating to the initiation and development of the financial system of the Commonwealth are contained in Sections 81 to 105A of the Commonwealth Constitution (*see* pages 16–19 of this Year Book). Two other sections which have a most important bearing on questions of Commonwealth finance are sections 69 and 51.

Section 69 provides for the transfer from the States to the Commonwealth of certain specified departments, and Section 51, in outlining the powers of the Commonwealth Parliament, implies the transfer or creation of other departments. Sections 87 and 96 deal with the financial relations between the Commonwealth and the States. The full text of the Financial Agreement of 1927 was given in Year Book No. 31, page 21; accounts of this Agreement as affected by subsequent Agreements were included in later issues of the Year Book up to No. 37 (*see* pages 685–90); details of the main provisions appeared in further issues of the Year Book up to No. 50 (*see* pages 952–3). Details of current provisions for financial assistance to the States are given on pages 547 to 555.

The *Audit Act* 1901–1969 lays down the procedure which must be followed in accounting for the receipt and disbursement of public funds. The general administration of Commonwealth finances is the responsibility of the Treasurer of the Commonwealth.

### Commonwealth Budget

The Commonwealth Budget records the transactions of those Commonwealth authorities whose receipts and payments are summarised in the statements of Treasury balances. In 1970-71 the change in cash balances was represented by the following—

	\$'000
Cash receipts of the Consolidated Revenue Fund . . . . .	7,837,823
<i>plus</i> cash receipts of Loan Fund . . . . .	1,471,489
<i>plus</i> cash receipts of Trust Fund . . . . .	3,957,021
<i>Total</i> . . . . .	13,266,333
<i>less</i> cash payments from Consolidated Revenue Fund . . . . .	7,837,823
<i>less</i> cash payments from Loan Fund . . . . .	1,471,488
<i>less</i> cash payments from Trust Fund (including increase in investments of the Trust Fund) . . . . .	3,799,635
<i>Total</i> . . . . .	13,108,946
<i>equals</i> increase in cash balances . . . . .	157,387

Revenues from taxation and other sources are paid into the Consolidated Revenue Fund, from which the main expenditures are for defence, social services, payments to the States and general administration. The Trust Fund covers special transactions outside the ordinary operations of departmental expenditures, such as pension funds and moneys held for expenditure by the Commonwealth at some future time. The Loan Fund receives its funds from the sale of Commonwealth securities, and the expenditures from the Fund are made in accordance with the purpose of issue of each loan. The main disbursements from the Loan Fund are to the States by way of distribution of the proceeds of loans raised by the Commonwealth on their behalf or in accordance with the Commonwealth and State Housing Agreements, and the remaining disbursements are for Commonwealth purposes such as defence or war service land settlement.

The receipts and outlay of the Commonwealth Budget for 1971-72 are set out in the table which follows, together with figures for the years 1967-68 to 1970-71. The national accounting presentation of the budget is shown in order to be consistent with other transactions figures given in this chapter.

It should be noted that some transactions undertaken by authorities covered by the Budget are not reflected in the change in cash balances, usually because they are not cash transactions or because a receipt and a payment are offset against each other so that only a net amount is included in published totals. The national accounting presentation of the Budget includes these additional transactions, further details of which may be found in the Appendix to the Supplement to the *Treasury Information Bulletin*, August 1970.



RECEIPTS AND OUTLAY OF COMMONWEALTH BUDGET, 1967-68 TO 1971-72 (ESTIMATED)  
(\$ million)

(Source: Supplement to the *Treasury Information Bulletin*, August 1971)

	1967-68	1968-69	1969-70	1970-71	1971-72 Budget Estimate
<b>Outlay—</b>					
Net expenditure on goods and services—					
Current . . . . .	1,661	1,783	1,812	1,977	2,216
Capital(a) . . . . .	162	179	186	223	227
Total . . . . .	1,823	1,962	1,998	2,200	2,443
Transfer payments—					
Cash benefits to persons . . . . .	1,294	1,406	1,598	1,771	2,001
Grants to States . . . . .	1,312	1,419	1,620	2,207	2,281
Interest paid . . . . .	476	502	546	576	600
Transfers overseas . . . . .	154	159	180	185	197
Subsidies . . . . .	179	261	247	309	347
Grants for private capital purposes . . . . .	57	31	33	35	36
Total . . . . .	3,471	3,779	4,223	5,083	5,462
Total expenditure . . . . .	5,294	5,741	6,221	7,283	7,905
Net advances—					
States . . . . .	629	625	667	520	561
Commonwealth authorities . . . . .	296	235	271	340	380
Other sectors . . . . .	30	31	36	47	54
Total . . . . .	955	891	974	907	995
Total outlay . . . . .	6,249	6,633	7,195	8,190	8,900
<b>Receipts—</b>					
Taxation—					
Indirect taxes . . . . .	1,847	2,035	2,244	2,501	2,580
Income tax on companies . . . . .	859	1,039	1,197	1,444	1,566
Income tax on persons . . . . .	2,175	2,377	2,855	3,175	3,659
Estate and gift duties . . . . .	63	70	80	78	86
Other direct taxes, fees, fines, etc. . . . .	37	43	46	47	48
Total . . . . .	4,981	5,564	6,422	7,244	7,939
Other receipts—					
Interest, rent and dividends . . . . .	583	642	711	800	877
Public enterprises income . . . . .	47	50	52	60	64
Net sales of existing assets(b) . . . . .	-2	-7	3	10	9
Total . . . . .	628	685	766	870	950
Total receipts . . . . .	5,608	6,248	7,188	8,114	8,890
<b>Deficit . . . . .</b>	<b>642</b>	<b>385</b>	<b>7</b>	<b>75</b>	<b>11</b>

(a) Expenditure on new fixed assets *plus* increase in stocks *less* sales of previously rented houses. (b) Excludes sales of previously rented houses.

### Financing of the Commonwealth deficit

The deficit shown in the last line of the preceding table represents the net excess of Budget outlay over receipts. In other words, the estimated deficit shown for 1971-72 represents the Commonwealth budget sector's 'financing requirement', and the actual deficits shown for earlier years represents the net outcome of the financing transactions of the budget sub-sector. Most such transactions involve the issue, repurchase, redemption or acquisition of Commonwealth securities, but some involve or are represented by changes in other assets or liabilities of the Commonwealth.

Specifically the deficit is financed as follows.

Net sales of Commonwealth securities (new issues, *less* redemptions, *less* net purchases from Commonwealth balances in the Trust Fund);

*less* net purchases of other investments from Commonwealth balances in the Trust Fund; *plus* minor items of indebtedness (such as borrowing by Australian Capital Territory and

Northern Territory housing trust accounts); and

*less* net additions to cash balances, and funds provided for the International Monetary Fund and the Australian Wheat Board.

The following table summarises the financing transactions of the Commonwealth budget sector for the years 1966-67 to 1970-71. Further details of Commonwealth loan transactions and of government securities on issue on account of the Commonwealth and the States are given in a later section of this Chapter.

#### COMMONWEALTH FINANCING TRANSACTIONS, 1966-67 TO 1970-71

(\$ million)

(Source: Statement No. 7 attached to the *Budget Speech*, 1971-72)

	1966-67	1967-68	1968-69	1969-70	1970-71
<b>Overseas—</b>					
Credit arrangements for defence purchases in the United States of America . . . . .	90.6	132.1	91.2	51.1	63.8
<i>Less</i> —repayments . . . . .	..	14.1	36.6	53.7	57.2
Net drawings . . . . .	90.6	118.0	54.6	-2.5	6.6
<b>Aircraft loans for Qantas and Australian National Airlines Commission . . . . .</b>	30.7	64.8	14.6	11.3	47.1
<i>Less</i> —repayments . . . . .	12.9	15.8	27.0	27.2	27.6
Net drawings . . . . .	17.9	49.0	-12.4	-15.9	19.5
<b>Other overseas loan proceeds . . . . .</b>	54.4	77.0	168.5	48.0	14.8
<i>Less</i> —redemptions, etc. . . . .	134.7	111.6	68.5	160.4	86.5
Net proceeds . . . . .	-80.2	-34.8	100.0	-112.4	-71.7
<i>Total net proceeds overseas . . . . .</i>	28.2	132.2	142.2	-130.9	-45.6
<b>Funds provided for International Monetary Fund . . . . .</b>	-27.2	-58.8	-5.0	..	-36.8
<b>Australia—</b>					
Proceeds of loans raised in Australia . . . . .	666.5	589.4	615.7	677.6	770.1
<i>Less</i> —redemptions, etc. . . . .	258.5	292.6	234.9	414.3	565.5
Net proceeds of loans raised in Australia . . . . .	408.0	296.8	380.8	263.3	204.6
Net change in Treasury Notes on issue . . . . .	-25.9	183.6	-68.3	46.5	17.9
Net advance to the Australian Wheat Board . . . . .	382.0	480.4	312.5	309.8	222.4
Other financing transactions . . . . .	4.7	37.4	62.4	45.1	27.4
<b>Residual Financing—</b>					
Net increase in Treasury Bills on issue . . . . .	10.0	51.0	-127.0	-14.0	..
Net issue of other securities to the Reserve Bank . . . . .	155.0	..	..	..	..
Use of cash balances . . . . .	-0.9	0.2	0.2	-19.4	-157.4
<i>Total residual financing . . . . .</i>	164.1	51.2	-126.8	-33.4	-157.4
<i>Total Australian financing transactions . . . . .</i>	550.8	569.0	248.0	137.6	157.7
<b>Total financing transactions . . . . .</b>	551.8	642.4	385.3	6.8	75.3

#### COMMONWEALTH AUTHORITIES

In addition to the group of Commonwealth authorities whose transactions are covered by the Budget (i.e. itemised in the Consolidated Revenue Fund or recorded in a Trust Fund), there are a number of organisations owned or controlled by the Commonwealth whose transactions do not, for the most part, pass through the Public Account. This category consists largely of public enterprises such as the Post Office, Qantas, Trans-Australia Airlines, the Overseas Telecommunications Commission, the Australian Coastal Shipping Commission, the Snowy Mountains Hydro-electric Authority, the Reserve Bank and the Commonwealth Banking Corporation. Public enterprises, it should be noted,

The tables given on pages 540-4 have been taken largely from Section I of the *Public Authority Finance: Commonwealth Authorities*, 1970-71. While these figures have been prepared on a national accounting basis, there are differences in concept and presentation as compared with *Australian National Accounts* as has already been mentioned; these differences are explained in *Public Authority Finance: Commonwealth Authorities*, and reference should also be made to that publication for definitions and descriptions of items included in these tables.

## COMMONWEALTH AUTHORITIES 1970-71

### RECEIPTS

Category	Amount (\$ million)
INCOME TAXES - INDIVIDUALS	\$3,175M
COMPANIES	\$1,431M
EXCISE DUTIES	\$1,053M
SALES TAX	\$633M
CUSTOMS DUTIES	\$466M
OTHER/NET	\$760M
<b>TOTAL</b>	<b>\$7,518 MILLION</b>

### OUTLAY

Category	Amount (\$ million)
CURRENT NET CURRENT EXPENDITURE ON GOODS AND SERVICES	\$1,771M
CASH BENEFITS TO PERSONS	\$1,652M
GRANTS TO STATES	\$495M
OTHER	\$757M
CAPITAL GROSS CAPITAL FORMATION	\$708M
GRANTS AND ADVANCES TO STATES	\$167M
OTHER	\$167M
<b>TOTAL</b>	<b>\$7,518 MILLION</b>

**Summary of receipts and outlay**

The receipts and outlay of all Commonwealth authorities for the five year period ended 1970-71 are given in the following table.

**COMMONWEALTH AUTHORITIES: RECEIPTS AND OUTLAY, 1966-67 TO 1970-71**  
(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71
<b>RECEIPTS</b>					
Current receipts—					
Taxes, fees, fines, etc. . . . .	4,492	4,954	5,530	6,382	7,185
Public enterprises—Gross operating surplus . . . . .	238	315	386	435	475
Interest . . . . .	71	55	62	65	81
Rent, royalties and dividends . . . . .	8	9	11	15	17
<i>Total current receipts . . . . .</i>	<i>4,810</i>	<i>5,332</i>	<i>5,988</i>	<i>6,896</i>	<i>7,756</i>
Capital receipts—					
Net borrowing—					
Government securities—					
Australia . . . . .	15	136	-258	57	-93
Overseas . . . . .	121	210	167	-42	-22
Public corporation securities . . . . .	1	1	..	12	..
Net receipts of private trust funds . . . . .	20	52	62	61	80
Other funds available (including errors and omissions) . . . . .	24	15	60	81	12
<i>Total capital receipts . . . . .</i>	<i>181</i>	<i>415</i>	<i>30</i>	<i>169</i>	<i>-22</i>
Reduction in—					
Cash and bank balances . . . . .	-8	-2	-15	-34	-83
Security holdings . . . . .	-10	-176	-156	-374	-133
<b>Total receipts . . . . .</b>	<b>4,974</b>	<b>5,569</b>	<b>5,848</b>	<b>6,658</b>	<b>7,518</b>
<b>OUTLAY</b>					
Current outlay—					
Net current expenditure on goods and services . . . . .	1,434	1,664	1,784	1,817	1,976
Interest . . . . .	24	35	26	23	13
Cash benefits to persons . . . . .	1,246	1,294	1,406	1,598	1,771
Subsidies . . . . .	146	151	231	215	261
Transfers overseas . . . . .	151	154	160	180	185
Grants for private capital purposes . . . . .	45	57	32	33	35
Grants to States . . . . .	965	1,057	1,155	1,309	1,652
<i>Total current outlay . . . . .</i>	<i>4,010</i>	<i>4,411</i>	<i>4,794</i>	<i>5,174</i>	<i>5,894</i>
Capital outlay—					
Gross capital formation—					
Expenditure on new fixed assets . . . . .	485	581	580	667	713
Expenditure on existing assets . . . . .	11	6	8	-2	-4
Increase in stocks . . . . .	1	-3	-3	-1	48
<i>Total . . . . .</i>	<i>497</i>	<i>584</i>	<i>585</i>	<i>664</i>	<i>757</i>
Advances to other sectors . . . . .	112	149	95	334	163
Grants to States . . . . .	218	255	264	312	555
Advances to States . . . . .	136	170	110	175	150
<i>Total capital outlay . . . . .</i>	<i>964</i>	<i>1,157</i>	<i>1,053</i>	<i>1,484</i>	<i>1,624</i>
<b>Total outlay . . . . .</b>	<b>4,974</b>	<b>5,569</b>	<b>5,848</b>	<b>6,658</b>	<b>7,518</b>



**Outlay classified by economic type and function**

In the following two tables the outlay of all Commonwealth authorities is shown in terms of a functional classification. The table on this page presents for 1970-71 the outlay under each functional head classified by economic type, highlighting the government's own demand for goods and services and the redistributive effect of its outlays. Current and capital outlay under each functional head are shown for the years 1966-67 to 1970-71 on page 542.

**COMMONWEALTH AUTHORITIES: TOTAL OUTLAY, BY ECONOMIC TYPE  
AND FUNCTION, 1970-71**

(\$ million)

CURRENT OUTLAY							
	<i>Expen- diture on goods and services</i>	<i>Cash benefits</i>	<i>Sub- sidies</i>	<i>Trans- fers over- seas</i>	<i>Current Grants to States</i>	<i>Grants for private capital pur- poses</i>	<i>Total</i>
Law, order and public safety . . . . .	18	..	..	..	..	..	18
Education . . . . .	57	45	..	1	103	2	209
Cultural and recreational facilities . . . . .	79	..	..	1	..	..	80
Health . . . . .	43	420	..	1	..	..	464
Welfare . . . . .	35	1,060	..	..	1	17	1,113
Defence . . . . .	1,068	..	..	19	..	..	1,088
Repatriation . . . . .	93	237	..	..	..	..	331
Development of resources and assistance to industry . . . . .	176	..	222	1	17	..	416
Transport and communication . . . . .	45	..	3	8	..	..	56
General administration and legislature . . . . .	218	..	..	2	..	..	220
Foreign affairs . . . . .	35	..	..	49	..	..	84
Immigration . . . . .	60	6	..	1	..	..	66
Regulation of trade and industry . . . . .	17	2	36	..	..	..	55
Housing . . . . .	6	..	..	..	..	15	21
Other . . . . .	6	..	..	102	..	..	108
Not allocated to function . . . . .	20	..	..	..	1,531	..	(a)1,564
<b>Total . . . . .</b>	<b>1,976</b>	<b>1,771</b>	<b>261</b>	<b>185</b>	<b>1,652</b>	<b>35</b>	<b>5,894</b>

CAPITAL OUTLAY						
	<i>Expen- diture on new assets and stocks</i>	<i>Expen- diture on existing assets</i>	<i>Capital grants to States</i>	<i>Advances to States</i>	<i>Advances to other sectors</i>	<i>Total</i>
Education . . . . .	19	..	74	..	..	93
Cultural and recreational facilities . . . . .	9	..	..	..	..	9
Health . . . . .	8	..	5	..	..	13
Defence . . . . .	..	3	..	..	..	3
Development of resources and assistance to industry . . . . .	73	..	33	14	-42	79
Transport and communication—						
Post office . . . . .	363	6	..	..	..	369
Civil aviation . . . . .	109	2	..	..	23	134
Roads . . . . .	31	..	227	-1	..	257
Other . . . . .	29	..	4	3	2	37
Power, fuel and light . . . . .	39	..	..	3	..	42
Housing . . . . .	15	-16	5	135	35	174
Other . . . . .	64	1	6	..	75	146
Not allocated to function . . . . .	4	..	200	-4	70	270
<b>Total . . . . .</b>	<b>761</b>	<b>-4</b>	<b>555</b>	<b>150</b>	<b>163</b>	<b>1,624</b>

(a) Including interest.

**COMMONWEALTH AUTHORITIES: TOTAL OUTLAY, BY FUNCTION**  
**1966-67 TO 1970-71**  
(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71
<b>CURRENT OUTLAY</b>					
Law, order and public safety . . . . .	10	12	13	16	18
Education . . . . .	91	108	122	158	209
Cultural and recreational facilities . . . . .	50	57	63	74	80
Health . . . . .	271	291	323	381	464
Welfare . . . . .	797	826	891	1,027	1,113
Defence . . . . .	914	1,067	1,097	1,042	1,088
Repatriation . . . . .	266	276	302	316	331
Development of resources and assistance to industry . . . . .	269	309	368	358	416
Transport and communication . . . . .	37	40	43	49	56
General administration and legislature . . . . .	135	149	160	184	220
Foreign affairs . . . . .	50	61	67	75	84
Immigration . . . . .	41	44	59	65	66
Regulation of trade and industry . . . . .	37	39	44	50	55
Housing . . . . .	16	18	18	18	21
Other . . . . .	88	87	91	101	108
Not allocated to function . . . . .	937	1,029	1,133	1,260	1,564
<b>Total current outlay . . . . .</b>	<b>4,010</b>	<b>4,411</b>	<b>4,794</b>	<b>5,174</b>	<b>5,894</b>
<b>CAPITAL OUTLAY</b>					
Education . . . . .	50	68	69	89	93
Cultural and recreational facilities . . . . .	11	11	9	9	9
Health . . . . .	11	8	8	11	13
Defence . . . . .	2	2	6	2	3
Development of resources and assistance to industry . . . . .	32	65	32	223	79
Transport and communication—					
Post office . . . . .	235	267	305	349	369
Civil aviation . . . . .	76	110	60	92	134
Roads . . . . .	171	183	199	222	257
Other . . . . .	54	65	60	75	37
Power, fuel and light . . . . .	51	48	39	51	42
Housing . . . . .	159	151	158	171	174
Other . . . . .	63	87	106	116	146
Not allocated to function . . . . .	48	93	2	76	270
<b>Total capital outlay . . . . .</b>	<b>964</b>	<b>1,157</b>	<b>1,053</b>	<b>1,484</b>	<b>1,624</b>
<b>TOTAL OUTLAY</b>					
<b>Total outlay . . . . .</b>	<b>4,974</b>	<b>5,569</b>	<b>5,848</b>	<b>6,658</b>	<b>7,518</b>

### Main components of outlay

The following tables give further details of the main components of the outlay of Commonwealth authorities, i.e. expenditure on goods and services, cash benefits, subsidies and payments to the States. More detailed information relating to outlay under specific function headings such as defence, education, health and welfare, may be found in the relevant chapters of this Year Book.

#### Expenditure on goods and services

Expenditure on goods and services by Commonwealth authorities (i.e. the demand by these authorities for the output of the producing sectors of the economy) consists essentially of purchases of goods and services for current consumption *less* any charges made by the authorities for goods and services which they themselves provide, together with expenditure on the acquisition of new fixed assets and existing assets (net of any sales of assets) and any change in stocks. The following tables show functional dissections of net current expenditure on goods and services and expenditure on new fixed assets for the five years ended 1970-71.

COMMONWEALTH AUTHORITIES: NET CURRENT EXPENDITURE ON GOODS AND SERVICES CLASSIFIED BY FUNCTION, 1966-67 TO 1970-71  
(\$ million)

Function	1966-67	1967-68	1968-69	1969-70	1970-71
Purchases of goods and services and grants to private non-profit organisations . . . .	1,502	1,738	1,887	1,925	2,092
Less charges for goods and services . . . .	69	74	103	108	115
<b>Net current expenditure on goods and services</b>	<b>1,434</b>	<b>1,664</b>	<b>1,784</b>	<b>1,817</b>	<b>1,976</b>
<i>of which—</i>					
Law, order and public safety . . . . .	10	12	13	15	18
Education . . . . .	24	29	35	42	57
Cultural and recreational facilities . . . . .	49	55	63	73	79
Health . . . . .	23	26	29	35	43
Welfare . . . . .	17	21	26	32	35
Defence . . . . .	877	1,041	1,078	1,017	1,068
Repatriation . . . . .	67	72	77	84	93
Development of resources and assistance to industry . . . . .	122	133	150	164	176
Transport and communication—					
Civil aviation . . . . .	27	31	33	38	43
Other . . . . .	2	2	2	2	2
<b>Total transport, etc. . . . .</b>	<b>29</b>	<b>33</b>	<b>35</b>	<b>40</b>	<b>45</b>
Legislature . . . . .	12	12	12	14	17
General administration . . . . .	122	134	145	169	201
Foreign affairs . . . . .	18	23	26	31	35
Immigration . . . . .	35	38	53	59	60
Regulation of trade and industry . . . . .	11	12	13	15	17
Housing . . . . .	4	5	5	6	6
Other . . . . .	2	2	3	3	6
Not allocated to function . . . . .	12	17	22	19	20

## COMMONWEALTH AUTHORITIES: EXPENDITURE ON NEW FIXED ASSETS CLASSIFIED BY FUNCTION, 1966-67 TO 1970-71

(\$ million)

<i>Function</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
Public enterprises—					
Development of resources and assistance to industry—					
Water supply, sewerage, etc. . . . .	14	10	8	10	13
Other . . . . .	..	..	..	..	..
Total development, etc. . . . .	14	10	8	10	13
Manufacturing . . . . .	1	..	1	1	1
Transport and communication—					
Post office . . . . .	234	265	301	342	363
Railways . . . . .	10	13	11	12	14
Other . . . . .	40	90	42	73	67
Total transport, etc. . . . .	284	367	354	426	443
Power, fuel and light . . . . .	51	42	35	40	40
Housing . . . . .	9	14	19	18	13
Banks . . . . .	11	16	14	15	17
Other . . . . .	..	..	..	..	..
Total public enterprises . . . . .	369	449	432	511	526
General government—					
Law, order and public safety . . . . .	1	1	2	1	2
Education . . . . .	10	14	13	18	19
Cultural and recreational facilities . . . . .	9	12	9	8	9
Health . . . . .	5	3	2	4	8
Welfare . . . . .	..	2	2	2	4
Repatriation . . . . .	1	2	2	2	5
Development of resources and assistance to industry—other . . . . .	9	12	12	14	15
Transport and communication—					
Civil aviation . . . . .	28	29	37	39	49
Roads . . . . .	13	18	23	23	31
Other . . . . .	1	1	2	2	2
Total transport, etc. . . . .	43	49	62	65	81
Housing . . . . .	1	1	1	1	1
Other . . . . .	30	34	37	33	40
Not allocated to function . . . . .	7	3	5	7	4
Total general government . . . . .	116	132	148	156	187
Grand total . . . . .	485	581	580	667	713

## Cash benefits to persons

Total payments of cash benefits to persons during the years 1966-67 to 1970-71 are shown in the next table. Further information relating to items in this table is given in the appropriate chapter of this Year Book, and figures of cash benefits paid to persons in each State and Territory may be found in *Public Authority Finance: Commonwealth Authorities*.



**COMMONWEALTH AUTHORITIES: CASH BENEFITS TO PERSONS 1966-67 TO 1970-71**  
(**\$'000**)

<i>Type of benefit</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
<b>Education—</b>					
Commonwealth scholarship scheme—					
Post-graduate . . . . .	2,432	2,899	3,588	4,526	5,209
University . . . . .	13,890	13,383	16,268	18,160	22,519
Advanced education . . . . .	660	754	1,001	1,628	2,793
Secondary . . . . .	6,243	6,474	6,558	6,738	6,791
Technical . . . . .	816	1,031	1,123	1,162	1,096
Soldiers' children education scheme . . . . .	2,462	2,720	3,154	3,203	3,407
Aboriginal study grants . . . . .	..	..	62	190	326
Aboriginal secondary grants . . . . .	..	..	..	522	2,201
Other . . . . .	680	719	753	854	941
<i>Total education . . . . .</i>	<i>27,184</i>	<i>27,979</i>	<i>32,508</i>	<i>36,982</i>	<i>45,283</i>
<b>Health —</b>					
Hospital benefits . . . . .	25,900	26,598	29,779	40,258	49,812
Hospital benefits for pensioners . . . . .	18,731	23,665	24,520	24,163	23,549
Nursing home benefits . . . . .	22,767	24,486	31,643	46,960	49,477
Medical benefits . . . . .	43,841	46,431	49,556	56,863	95,604
Medical benefits for pensioners . . . . .	14,351	16,116	16,912	19,224	19,904
Milk for school children . . . . .	9,021	9,831	10,053	10,051	10,160
Pharmaceutical benefits . . . . .	72,001	73,019	81,764	95,650	115,094
Pharmaceutical benefits for pensioners . . . . .	29,280	32,115	36,609	41,069	45,181
Tuberculosis campaign . . . . .	10,974	11,266	11,460	10,554	10,597
Handicapped children's benefit . . . . .	..	..	76	485	456
<i>Total health . . . . .</i>	<i>246,866</i>	<i>263,529</i>	<i>292,373</i>	<i>345,277</i>	<i>419,834</i>
<b>Welfare—</b>					
Age and invalid pensions . . . . .	481,840	513,984	558,587	641,982	702,276
Child endowment . . . . .	199,282	187,920	193,263	220,143	198,467
Commonwealth rehabilitation service . . . . .	1,844	1,944	2,260	2,758	3,646
Funeral benefits . . . . .	1,334	1,338	1,571	1,512	1,653
Maternity allowances . . . . .	7,294	7,349	7,960	8,000	8,554
Tuberculosis campaign—allowances . . . . .	1,193	1,091	921	771	659
Unemployment benefits, sickness and special benefits . . . . .	19,044	18,832	16,830	18,592	23,478
Widows' pensions . . . . .	56,438	61,061	69,080	81,753	90,514
Sheltered employment allowances . . . . .	..	104	288	436	590
Deserted wives benefits . . . . .	..	201	1,149	1,882	3,691
Personal care . . . . .	..	..	..	1,133	1,592
Delivered meals . . . . .	..	..	..	196	341
Emergency assistance to woolgrowers . . . . .	..	..	..	..	21,327
Other . . . . .	2,076	2,267	3,051	2,938	3,673
<i>Total welfare . . . . .</i>	<i>770,344</i>	<i>796,092</i>	<i>854,960</i>	<i>982,094</i>	<i>1,060,461</i>
<b>Development of resources and assistance to industry—</b>					
Wool research studentships . . . . .	158	270	360	341	368
<b>Repatriation—</b>					
War and service pensions and allowances . . . . .	190,983	196,219	216,958	223,366	235,122
Other . . . . .	1,769	1,954	1,981	2,192	2,310
<i>Total repatriation . . . . .</i>	<i>192,752</i>	<i>198,173</i>	<i>218,939</i>	<i>225,557</i>	<i>237,431</i>
<b>Immigration—</b>					
Maintenance of migrant families . . . . .	5,240	4,460	4,277	4,623	4,925
Other . . . . .	..	345	656	681	731
<i>Total immigration . . . . .</i>	<i>5,240</i>	<i>4,804</i>	<i>4,933</i>	<i>5,304</i>	<i>5,656</i>
<b>Regulation of trade and industry—</b>					
Coal mining industry—long service leave . . . . .	919	918	892	985	1,062
Stevedoring industry—attendance money, etc. . . . .	2,700	2,196	1,410	1,141	1,123
<i>Total regulation of trade, etc. . . . .</i>	<i>3,619</i>	<i>3,114</i>	<i>2,302</i>	<i>2,127</i>	<i>2,185</i>
<b>Housing—</b>					
Commonwealth-State Housing Agreement—					
Contribution to rental losses . . . . .	142	44	60	74	131
<i>Grand total . . . . .</i>	<i>1,246,305</i>	<i>1,294,004</i>	<i>1,406,435</i>	<i>1,597,757</i>	<i>1,771,350</i>

## Subsidies

The following table shows details of Commonwealth outlay on subsidies and bounties for the years 1966-67 to 1970-71. Other assistance to primary producers is included in, for example, tables relating to cash benefits and payments to the States, and additional information is given in Chapter 22, Rural Industry.

COMMONWEALTH AUTHORITIES: SUBSIDIES 1966-67 TO 1970-71  
(\$'000)

Type of subsidy	1966-67	1967-68	1968-69	1969-70	1970-71
<b>Development of resources and assistance to industry—</b>					
Dairy industry . . . . .	27,000	27,000	27,000	27,000	41,500
Wheat prices stabilisation . . . . .	16,154	15,508	42,870	..	29,008
Phosphate fertilisers . . . . .	26,319	23,564	31,665	45,820	40,815
Oil search . . . . .	9,736	11,552	12,333	14,298	9,643
Nitrogenous fertilisers . . . . .	6,665	10,308	11,044	9,876	9,716
Gold mining industry . . . . .	3,848	4,302	1,737	1,812	2,828
Pyrites . . . . .	103	..	..	..	568
Cotton . . . . .	2,813	4,027	4,620	3,531	2,973
Processed milk products . . . . .	899	743	638	516	2,729
Sulphate of ammonia . . . . .	830	565	430	1,081	538
Vinyl resin . . . . .	1,592	12	..	..	..
Sulphuric acid . . . . .	1,556	1,286	988	740	489
Tractor . . . . .	2,221	2,480	2,249	1,757	2,750
Cellulose acetate flake . . . . .	218	220	179	276	200
Poultry industry assistance . . . . .	9,213	10,418	10,920	11,544	12,611
Urea . . . . .	9	163	424	496	449
Devaluation compensation . . . . .	..	..	35,627	30,069	21,600
Book bounty . . . . .	..	..	..	1,374	3,217
Industrial research and development grants . . . . .	..	654	5,300	8,915	16,250
Ship construction . . . . .	11,660	11,605	12,551	18,758	18,677
Dried vine fruits stabilisation . . . . .	..	..	..	1,240	1,161
Wool marketing assistance . . . . .	..	..	..	..	2,900
Wool Commission . . . . .	..	..	..	..	1,340
<i>Total development, etc.</i> . . . .	<i>120,837</i>	<i>124,407</i>	<i>200,576</i>	<i>179,103</i>	<i>221,961</i>
<b>Transport and communication—</b>					
Air services . . . . .	1,306	1,901	1,780	1,800	2,000
Coastal shipping service—					
King Island and Bass Strait Islands . . . . .	160	150	141	150	160
Northern Territory . . . . .	44	39	24	27	12
Northern Territory—					
Railway freight . . . . .	110	100	113	87	114
Superphosphate sea subsidy . . . . .	5	43	23	50	68
Transport of stud stock . . . . .	83	80	175	245	129
Drought relief freight concessions . . . . .	57	50	2	239	149
South American shipping service . . . . .	351	300	180	157	113
<i>Total transport, etc.</i> . . . .	<i>2,115</i>	<i>2,663</i>	<i>2,437</i>	<i>2,755</i>	<i>2,745</i>
<b>Regulation of trade and industry—</b>					
Petrol prices stabilisation . . . . .	15,218	16,578	17,948	20,625	21,737
Northern Territory petrol prices . . . . .	750	991	1,316	1,742	2,092
Stevedoring industry . . . . .	6,464	6,190	9,131	10,560	12,451
<i>Total regulation of trade, etc.</i> . . . .	<i>22,432</i>	<i>23,759</i>	<i>28,395</i>	<i>32,927</i>	<i>36,280</i>
Other . . . . .	400	400	68	..	..
<b>Total</b> . . . . .	<b>145,783</b>	<b>151,229</b>	<b>231,477</b>	<b>214,785</b>	<b>260,987</b>

**Grants and advances to the States**

Commonwealth financial assistance to the States takes two main forms: (i) direct financial assistance in the form of grants for general and specific purposes, and (ii) assistance for developmental and other specific purposes in the form of repayable advances. Some information about the more important or most recent of these forms of financial assistance is given on pages 547-55, but for more complete information reference should be made to the Commonwealth Budget paper *Commonwealth Payments to or for the States*. Further information also appears in chapters of this Year Book dealing with the specific function which the payments are designed to serve.

**Grants to the States**

The following tables show details of grants to the States for general and specific purposes. More detailed figures appear in *Public Authority Finance: Commonwealth Authorities*.

**COMMONWEALTH AUTHORITIES: GRANTS TO THE STATES, BY FUNCTION, 1970-71**  
(*\$'000*)

<i>Function</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
<b>CURRENT GRANTS</b>							
Specific purpose—							
Education . . . . .	37,789	31,280	13,132	9,544	8,237	3,337	103,317
Health . . . . .	12	10	129	33	100	7	290
Welfare . . . . .	249	6	155	100	18	5	533
Development of resources and assistance to industry . .	3,006	1,814	10,212	651	717	396	16,796
Other functions . . . . .	—328	..	..	..	..	..	—328
Not allocated to function—							
Payments under Financial Agreement . . . . .	13,958	10,180	5,387	4,634	3,332	2,228	39,720
Debt charges assistance . .	3,800	2,783	1,525	1,496	1,106	795	11,504
<i>Total specific . . . . .</i>	<i>58,486</i>	<i>46,073</i>	<i>30,540</i>	<i>16,458</i>	<i>13,510</i>	<i>6,768</i>	<i>171,832</i>
General purpose—							
Financial assistance grants .	470,835	351,024	216,672	151,602	163,313	65,071	1,418,518
Special grants . . . . .	..	..	..	5,000	..	13,680	18,680
Special revenue assistance .	14,140	10,560	6,603	4,650	5,030	2,017	43,000
<i>Total general . . . . .</i>	<i>484,975</i>	<i>361,584</i>	<i>223,275</i>	<i>161,252</i>	<i>168,343</i>	<i>80,768</i>	<i>1,480,198</i>
<b>Total current . . . . .</b>	<b>543,461</b>	<b>407,657</b>	<b>253,815</b>	<b>177,710</b>	<b>181,851</b>	<b>87,536</b>	<b>1,652,029</b>
<b>CAPITAL GRANTS</b>							
Specific purpose—							
Education . . . . .	24,199	22,800	10,419	9,162	5,044	2,411	74,034
Health . . . . .	1,641	953	773	1,050	749	238	5,404
Welfare . . . . .	1,875	1,929	126	425	905	158	5,419
Development of resources and assistance to industry . .	12,809	2,445	9,280	1,687	6,504	532	33,255
Transport and communication .	64,980	43,460	47,259	25,519	39,451	10,230	230,900
Other functions . . . . .	1,352	286	1,770	375	1,729	35	5,547
<i>Total specific . . . . .</i>	<i>106,856</i>	<i>71,873</i>	<i>69,627</i>	<i>38,218</i>	<i>54,382</i>	<i>13,604</i>	<i>354,559</i>
General purpose—							
Capital assistance grants . .	63,610	51,020	25,290	27,420	18,680	13,980	200,000
<b>Total capital . . . . .</b>	<b>170,466</b>	<b>122,893</b>	<b>94,919</b>	<b>65,638</b>	<b>73,062</b>	<b>27,584</b>	<b>554,559</b>

**COMMONWEALTH AUTHORITIES: GRANTS TO THE STATES, BY FUNCTION**  
**1966-67 TO 1970-71**  
 (\$'000)

<i>Function</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
<b>CURRENT GRANTS</b>					
Specific purpose—					
Education . . . . .	38,771	48,338	52,846	77,005	103,317
Health . . . . .	..	..	162	162	290
Welfare . . . . .	-50	-40	-55	16	533
Development of resources and assistance to industry . . . . .	25,345	30,285	15,964	14,464	16,796
Other functions . . . . .	-238	-275	-294	-319	-328
Not allocated to function—					
Payments under Financial Agreement	34,121	35,557	36,789	38,441	39,720
Debt charges assistance . . . . .	..	..	..	..	11,504
<i>Total specific.</i> . . . .	<i>97,949</i>	<i>113,865</i>	<i>105,412</i>	<i>129,769</i>	<i>171,832</i>
General purpose—					
Financial assistance grants . . . . .	826,613	907,539	1,018,193	1,141,319	1,418,518
Special grants . . . . .	40,072	35,407	17,392	21,900	18,680
Special revenue assistance . . . . .	..	..	14,000	16,000	43,000
<i>Total general</i> . . . . .	<i>866,685</i>	<i>942,946</i>	<i>1,049,585</i>	<i>1,179,219</i>	<i>1,480,198</i>
<b>Total current.</b> . . . .	<b>964,633</b>	<b>1,056,811</b>	<b>1,154,996</b>	<b>1,308,988</b>	<b>1,652,029</b>
<b>CAPITAL GRANTS</b>					
Specific purpose—					
Education . . . . .	40,092	53,958	55,377	71,160	74,034
Health . . . . .	5,501	5,062	5,861	7,053	5,404
Welfare . . . . .	..	..	125	1,081	5,419
Development of resources and assistance to industry . . . . .	3,155	8,423	12,396	17,376	33,255
Transport and communication . . . . .	167,691	186,589	187,501	211,167	230,900
Other functions . . . . .	1,953	843	2,648	3,669	5,547
<i>Total specific.</i> . . . .	<i>218,393</i>	<i>254,876</i>	<i>263,908</i>	<i>311,506</i>	<i>354,559</i>
General purpose—					
Capital assistance grants . . . . .	..	..	..	..	200,000
<b>Total capital.</b> . . . .	<b>218,393</b>	<b>254,876</b>	<b>263,908</b>	<b>311,506</b>	<b>554,559</b>

**General purposes grants**

*The Financial Assistance Grants.* Details of the financial assistance grants arrangements existing in 1970-71 and prior years are given in earlier issues of the Year Book (see No. 57, page 543). Revised arrangements to apply over the five years 1970-71 to 1974-75 are embodied in the *States Grants Act 1970-1971*.

The financial assistance grants, which are the main general revenue grants to the States, will continue to increase each year in proportion to the increase in average wages in Australia as a whole in the year ending 31 March in the year of payment and to the increase in each States' population in the year ending 31 December in the year of payment and by a further 'betterment factor'. However, this last factor will increase, beginning with the calculation of the 1971-72 grants, from 1.2 per cent to 1.8 per cent. Additional grants of \$40 million were paid in 1970-71 and distributed between the States in proportion to the other grants payable to them under the Act and these grants will increase in subsequent years under the formula. Further grants will be provided in the years 1970-71 to 1974-75 to New South Wales and Victoria (equal to two dollars per head of their population) to Queensland (by way of an annual addition of \$2 million to the base on which its grant is calculated) and to Western Australia (the amount being \$9.5 million in 1971-72 reducing by \$3 million each year down to \$0.5 million in 1974-75). Compensatory grants payable to the States for the loss of receipts duty are subject to increases under the formula. As from 1971-72, financial assistance



grants otherwise payable are to be reduced to offset the transfer of payroll taxation from the Commonwealth to the States. The following table shows details of the calculation of the financial assistance grants for 1970-71.

CALCULATION OF FINANCIAL ASSISTANCE GRANTS FOR 1970-71  
(\$'000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
'Base' grants(a) . . . . .	373,908	280,008	178,522	125,706	123,335	46,340	1,127,819
Plus additions under formula(b) . . . . .	50,420	36,824	23,808	16,774	18,690	5,763	152,279
Plus additional grants(c) . . . . .	13,259	9,900	6,322	4,452	4,438	1,628	40,000
Formula grants . . . . .	437,587	326,732	208,652	146,932	146,463	53,731	1,320,098
Plus additional grants to particular States . . . . .	(d)9,248	(d)6,962	..	..	(e)12,500	(f)10,000	38,709
Plus receipts duty compensation grants . . . . .	24,000	17,330	8,020	4,670	4,350	1,340	59,710
Total financial assistance grants . . . . .	470,835	351,024	216,672	151,602	163,313	65,071	1,418,518

(a) Financial assistance grants paid in 1969-70 under the *States Grants Act* 1965-1968 other than the additional grant of \$15.5 million paid to Western Australia in lieu of its previous special grant, plus \$2 million in the case of Queensland, (b) Due to population increases in each State in the year ended 31 December 1970 (the weighted average of these increases was 2.09 per cent) to an increase in average wages in Australia as a whole in the year ending March 1971 of 0.86 per cent, and to the betterment factor of 1.2 per cent. (c) Additional grants provided as part of the revised revenue assistance arrangements settled at the June 1970 Premier's Conference. (d) Equal to \$2 per head of these States' populations at 31 December 1970. (e) Additional grant reduced from the \$15.5 million paid in 1968-69 and 1969-70 in lieu of the special grant previously received in the State. (f) Transferred from the State's special grant.

*Special Grants.* These grants are paid to the financially weaker States as supplements to the financial assistance grants. They are subject to annual recommendation by the Commonwealth Grants Commission. Each recommendation by the Commission for payment of a special grant consists of two parts: (i) One part is based on an estimate of the claimant State's financial need in the current financial year, and is treated as an advance payment subject to adjustment two years later when the Commission has compared in detail the audited budget results and standards of effort and of services provided in that year for both the claimant State and the States which the Commission takes as 'standard' (New South Wales and Victoria at present). (ii) The other part represents the final adjustment to the advance payment made two years earlier and is known as the completion payment. The following table shows special grants paid in the years 1967-68 to 1971-72.

COMMONWEALTH GRANTS COMMISSION: GRANTS RECOMMENDED, 1967-68 TO 1971-72  
(\$'000)

	1967-68	1968-69	1969-70	1970-71	1971-72
South Australia—					
Advance payment . . . . .	..	..	..	(a)5,000	(a)7,000
Completion payment(b) . . . . .	..	..	..	..	..
Total . . . . .	..	..	..	5,000	7,000
Western Australia—					
Advance payment . . . . .	15,500	..	..	..	..
Completion payment(b) . . . . .	18	582	..	..	..
Total . . . . .	15,518	582	..	..	..
Tasmania—					
Advance payment . . . . .	19,000	18,000	22,000	22,000	11,000
Completion payment(b) . . . . .	889	-1,190	-100	1,680	-3,200
Total . . . . .	19,889	16,810	21,900	(c)23,680	7,800
Grand total . . . . .	35,407	17,392	21,900	28,680	14,800

(a) Completion grant (positive or negative) may be recommended for 1970-71 and 1971-72 in 1972-73 and 1973-74 as years of review. (b) Adjustment to estimated grant paid two years previously. (c) \$1,000,000 and \$13,680,000 paid as Financial Assistance Grants and Special Grants respectively.

Minus sign (—) denotes excess of repayment.

*Capital assistance grants.* Also as part of the new revenue assistance arrangements, the Commonwealth has undertaken to pay grants to the States to finance capital works. The grants replace State borrowings and thereby relieve them of debt charges they would otherwise have had to pay. These grants, which were authorised by the *States Grants (Capital Assistance) Act 1970*, totalled \$200 million in 1970-71 and will total \$209.8 million in 1971-72.

### Specific purpose grants

#### *Education*

Payments to the States for universities were first introduced in 1951-52, and details of the States Grants (Universities) Acts under which they were continued are given in earlier issues of the Year Book (see No. 51 page 923 and No. 52 page 770). The *States Grants (Universities) Act 1969* authorised grants totalling approximately \$226,800,000 for the Commonwealth share of the agreed programme of development of State universities for the years 1970 to 1972. (See also Chapter 19, Education, Cultural Activities, and Research.)

The Commonwealth, in the 1970-72 triennium, is meeting the full cost of a \$12.5 million research programme approved by the Australian Research Grants Committee. A further \$4 million is also being made available by the Commonwealth for a special programme of research and research training at State universities.

*Colleges of Advanced Education.* Under the States Grants (Advanced Education) Acts, the Commonwealth is providing financial assistance to the States of \$93.1 million during the 1970-72 triennium for recurrent and capital expenditures.

The *States Grants (Science Laboratories) Act 1971* extended for the four years ending 30 June 1975 the operation of the scheme outlined in Official Year Book No. 54 page 745. A total payment of \$43.3 million is provided for with equal annual authorisations.

Grants for buildings and equipment for use in technical training in schools and colleges conducted by States only are provided for under the *States Grants (Science Laboratories and Technical Training) Act 1964* and the *States Grants (Technical Training) Act 1965-1966*.

Under the *States Grants (Teachers Colleges) Act 1970* the Commonwealth provided for a maximum amount of \$30 million over the three years ending 30 June 1973 for the construction and equipping of teachers colleges.

Under the *States Grants (Secondary School Libraries) Act 1968* grants totalling \$27 million were made to the States over the three years commencing 1 January 1969 to finance buildings and associated capital facilities for libraries in government and non-government secondary schools.

The *States Grants (Pre-school Teachers Colleges) Acts 1968, 1971 and 1972* provided for capital grants totalling \$2.5 million to 31 December 1973 for the purpose of increasing the physical capacity of approved pre-school teachers colleges.

The *States Grants (Independent Schools) Act 1969* authorised payments to the States, for transmission to independent schools, of contributions to school running costs at rates of \$35 per primary pupil and \$50 per secondary pupil per annum as from the beginning of 1970.

#### *Health*

The *Tuberculosis Act 1948* provided for the reimbursement by the Commonwealth of capital and maintenance expenditure incurred by the States in the provision of facilities for the diagnosis, treatment and control of tuberculosis.

The *States Grants (Mental Health Institutions) Act 1964-1970* authorised assistance to the States amounting to one-third of their total expenditure on building and equipping approved mental health institutions up to 30 June 1973.

#### *Welfare*

The *States Grants (Home Care) Act, 1969* the *States Grants (Paramedical Services) Act 1969* and the *States Grants (Nursing Homes) Act 1969* provide funds for a range of home care services, senior citizens' centres and nursing homes, mainly for aged persons. See Chapters 13, Welfare Services, and 14, Public Health.

*Development of resources and assistance to industry**Natural disasters*

Payments to the States for natural disaster relief (drought, flood, bushfire, earthquake, cyclone, mouse plague) include financial assistance to alleviate personal hardship and distress and to enable the States to meet budgetary problems arising from the effects on their revenues of such natural disasters. Such relief does not normally cover the full cost of restoration of private assets damaged by natural disasters, it being regarded as the individual's responsibility to provide against such losses by way of insurance. Of the total amount of \$15,094,000 made available by the Commonwealth for this purpose in 1970-71, grants of \$9,673,000 were paid to Queensland and \$5,078,000 to New South Wales for drought and flood relief and flood damage restoration.

*Water resources projects*

*Investigation and measurement of water resources.* Commonwealth commitments under the National Water Resources Development Programme up to 30 June 1971 included further grants of up to \$12.8 million to Queensland for Bundaberg Irrigation Works, further assistance of up to \$9 million to New South Wales for flood mitigation works on various of its coastal rivers, further grants of up to \$4.7 million to New South Wales and Queensland towards the cost of construction of a dam and associated works on Pike Creek in the border river region of the two States, and of \$8.2 million for additional investigation and measurement of State water resources in a three-year programme commencing in 1970-71.

*Fairbairn Dam.* The *Queensland Grant (Maraboon Dam) Act* 1968 provided for grants to Queensland of up to \$20 million for the construction of a dam on the Nogoa River near Emerald.

*Copeton Dam.* Commonwealth grants up to \$20 million will be made to New South Wales under the *New South Wales Grant (Gwydir River Dam) Act* 1969 for the construction of a dam on the Gwydir River near Copeton.

*King River Dam.* Under the *Victoria Grant (King River Dam) Act* 1969 the Commonwealth is providing grants of up to \$4 million to Victoria for the construction of a dam on the King River south of Cheshunt.

*Tailem Bend to Keith Pipeline.* The construction of a pipeline and certain associated works to carry water from Tailem Bend to Keith in South Australia is being assisted financially by provision of grants up to \$6 million under the *South Australia Grant (Tailem Bend to Keith Pipeline) Act* 1969.

*Ord River Irrigation Project.* The *Western Australia (Ord River Irrigation) Act* 1968 provided for financial assistance to Western Australia on the basis of grants for dam construction and interest-bearing loans in respect of the irrigation works. Grants amounting to \$5,707,000 were paid during 1970-71.

*River Murray Salinity Reduction.* The *Victoria Grant (River Murray Salinity) Act* 1968 provides for grants to Victoria of up to \$3,600,000 for two salinity reduction projects on the River Murray.

*Cressy-Longford Irrigation Works, Tasmania.* Grants of up to \$750,000 to Tasmania for the construction of a channel system and associated works to carry water from the tailrace of the Poatina Power Station to supply rural holdings were provided for by the *Tasmania Grant (Cressy-Longford Irrigation Works) Act* 1969.

*Assistance to Primary Industry*

*Marginal dairy farms reconstruction.* Under the *Marginal Dairy Farms Agreement Act* 1970 the Commonwealth may provide financial assistance to the States of up to \$25 million to enable the States to acquire marginal dairy farms from their owners by agreement, and dispose of them so as to encourage the most practicable and economic use of the land. The States are required to repay half of the sum paid out by the Commonwealth under this scheme. Payments to the States in 1970-71 amounted to \$3,122,000.

*Rural reconstruction.* The *States Grants (Rural Reconstruction) Act* 1971 provides for the Commonwealth to make available up to \$100 million over the period ended 30 June 1975 to finance schemes for farm debt reconstruction, farm build-up, and rehabilitation for persons forced to leave rural industry. Three-quarters of the amount paid by the Commonwealth over the period of the scheme is to be repaid by the States. Payments under the scheme in 1970-71 amounted to \$4 million.



*Transport and communication**Roads projects*

The *Commonwealth Aid Roads Act* 1969 provided for principal and supplementary grants totalling \$1,252,050,000 to be paid to the States over the five-year period commencing on 1 July 1969. Supplementary grants totalling \$52,050,000 are to be made to South Australia, Western Australia and Tasmania to assist in the transition from arrangements under the 1964 Act and the principal grant of \$1,200 million is to be allocated specifically as follows: Urban-arterial and sub-arterial roads \$600,690,000; Rural-arterial roads \$186,760,000 and other rural roads \$394,550,000; and planning and research \$18,000,000. Total grants of \$1,252,050,000 payable in the five-year period from 1969-70 to 1973-74 are to be allocated on the following basis: New South Wales \$380,400,000; Victoria, \$254,400,000; Queensland, \$231,600,000; South Australia, \$129,000,000; Western Australia, \$200,400,000 and Tasmania \$56,250,000. For details of previous legislation *see* earlier year books.

*Beef cattle roads.* The *States Grants (Beef Cattle Roads) Act* 1968 provided for grants of \$39,500,000, \$9,500,000, and \$1,000,000 for Queensland, Western Australia, and South Australia respectively for a programme of beef cattle road construction over a period of seven years commencing from 1 July 1967.

*Railway projects*

The Commonwealth is continuing to make grants to South Australia and Western Australia under its railway standardisation agreement with those two States. In addition, in 1971-72 \$1.75 million was made available to Tasmania to meet part of the cost of the construction of a new rail link between Nelsons Creek and Bell Bay, and the upgrading of the existing rail track between Launceston and Nelsons Creek and associated works.

*Other functions*

*Housing.* With the termination of the Commonwealth-State Housing Agreement, States' borrowings through the Loan Council are to be supplemented by: (i) cumulative grants of \$2.75 million a year payable for 30 years in respect of each of the years from 1971-72 to 1975-76 to replace interest concessions under the old agreement, the total sum over 30 years is to aggregate \$412.5 million; (ii) non-cumulative grants of \$1.25 million each year for the next five years, a total of \$6.25 million, for reducing rents of dwellings for families considered to have insufficient means to pay the rents ordinarily payable to State authorities in respect of these dwellings.

*Aboriginal Advancement.* The *States Grants (Aboriginal Advancement) Acts* 1968 and 1969 provided for the payment to the States of grants totalling \$7 million in 1970-71 and an estimated \$9.2 million in 1971-72 for Aboriginal advancement particularly in the fields of housing, education and health.

*Development of Exmouth township, Western Australia.* The Commonwealth has assisted the Western Australian Government in financing the cost of developing a township at Exmouth in connection with the United States Naval Communications Station established at North West Cape.

*Other specific purpose grants*

*Contributions under Financial Agreement.* Details of the Financial Agreement between the Commonwealth and the States are given in Year Book No. 37, pages 685-90. Under this Agreement the Commonwealth undertook to contribute \$15,169,824 per annum towards interest payable on the State loan securities for a period of 58 years from 1 July 1927. This amount is distributed among the States as follows: New South Wales, \$5,834,822; Victoria, \$4,254,318; Queensland, \$2,192,470; South Australia, \$1,407,632; Western Australia, \$946,864; Tasmania, \$533,718. In addition, under the Financial Agreement the Commonwealth agreed to make certain contributions to the National Debt Sinking Fund for redemption of State loan securities. Details of these are given on page 599 of this chapter.

*Debt Charges Assistance.* As part of the revised revenue assistance arrangements to apply over the five years 1970-71 to 1974-75 the Commonwealth is providing the States with grants to finance increasing portions of the interest and sinking fund charges on certain State debt amounting to \$1,000 million. The grants, which are authorised by the *States Grants (Debt Charges Assistance) Act* 1970 totalled \$23,008,000 in 1970-71 and will increase by that sum each year, up to \$57,520,000 in 1974-75.



**Advances to the States**

The following tables show figures of advances to the States and repayments of advances. More detailed figures appear in *Public Authority Finance: Commonwealth Authorities*.

**COMMONWEALTH AUTHORITIES: ADVANCES TO THE STATES, BY FUNCTION, 1970-71**  
(\\$'000)

<i>Function</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
GROSS							
Development of resources and assistance to industry . . .	5,397	4,815	7,624	2,953	3,841	1,418	26,047
Transport and communication—							
Railway projects . . . . .	..	..	..	676	3,080	..	3,756
Other . . . . .	..	..	..	2,250	..	..	2,250
Power, fuel and light . . . . .	..	..	..	..	..	3,211	3,211
Housing . . . . .	51,148	40,048	11,798	25,000	14,033	8,750	150,777
Not allocated to function(a) . . .	..	..	..	..	..	..	..
<b>Total gross advances . . .</b>	<b>56,545</b>	<b>44,863</b>	<b>19,422</b>	<b>30,879</b>	<b>20,954</b>	<b>13,379</b>	<b>186,041</b>
REPAYMENTS							
Development of resources and assistance to industry . . .	2,994	871	3,217	1,931	1,469	1,708	12,191
Transport and communication—							
Railway projects . . . . .	96	96	1,347	333	1,360	..	3,232
Other . . . . .	330	..	639	..	151	..	1,120
Power, fuel and light . . . . .	..	..	..	..	..	..	..
Housing . . . . .	5,476	4,900	1,490	1,842	1,384	556	15,647
Not allocated to function(a) . . .	3,281	-208	74	327	400	-168	3,704
<b>Total repayments . . .</b>	<b>12,177</b>	<b>5,659</b>	<b>6,767</b>	<b>4,433</b>	<b>4,764</b>	<b>2,096</b>	<b>35,894</b>
NET							
Development of resources and assistance to industry . . .	2,403	3,944	4,407	1,022	2,372	-290	13,856
Transport and communication—							
Railway projects . . . . .	-96	-96	-1,347	343	1,720	..	525
Other . . . . .	-330	..	-639	2,250	-151	..	1,130
Power, fuel and light . . . . .	..	..	..	..	..	3,211	3,211
Housing . . . . .	45,671	35,147	10,309	23,158	12,650	8,194	135,130
Not allocated to function(a) . . .	-3,281	208	-74	-327	-400	168	-3,704
<b>Total net advances . . .</b>	<b>44,367</b>	<b>39,203</b>	<b>12,655</b>	<b>26,446</b>	<b>16,191</b>	<b>11,283</b>	<b>150,147</b>

(a) Comprised mainly of States' deposits with the National Debt Sinking Fund.  
Minus sign (-) denotes excess of repayment.

**COMMONWEALTH AUTHORITIES: ADVANCES TO THE STATES  
BY FUNCTION, 1966-67 TO 1970-71  
(\$'000)**

<i>Function</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
<b>GROSS</b>					
Development of resources and assistance to industry . . . . .	24,467	50,412	22,429	16,922	26,047
Transport and communication—					
Railway projects . . . . .	12,647	13,989	7,554	8,277	3,756
Other . . . . .	2,805	..	11,000	..	2,250
Power, fuel and light . . . . .	..	5,300	3,200	9,704	3,211
Housing . . . . .	127,753	129,943	132,899	141,691	150,777
Not allocated to function(a) . . . . .	..	726	..	35,474	..
<b>Total gross advances . . . . .</b>	<b>167,672</b>	<b>200,370</b>	<b>177,082</b>	<b>212,068</b>	<b>186,041</b>
<b>REPAYMENTS</b>					
Development of resources and assistance to industry . . . . .	17,098	15,402	19,482	18,829	12,191
Transport and communication—					
Railway projects . . . . .	1,540	1,724	1,886	3,010	3,232
Other . . . . .	494	1,113	1,114	1,118	1,120
Power, fuel and light . . . . .	14	25	1	..	..
Housing . . . . .	11,240	12,297	13,413	14,567	15,647
Not allocated to function(a) . . . . .	990	..	31,202	..	3,704
<b>Total repayments . . . . .</b>	<b>31,376</b>	<b>30,562</b>	<b>67,098</b>	<b>37,524</b>	<b>35,894</b>
<b>NET</b>					
Development of resources and assistance to industry . . . . .	7,368	35,010	2,947	—1,908	13,856
Transport and communication—					
Railway projects . . . . .	11,107	12,265	5,668	5,267	525
Other . . . . .	2,311	—1,113	9,886	—1,118	1,130
Power, fuel and light . . . . .	—14	5,275	3,199	9,704	3,211
Housing . . . . .	116,513	117,646	119,486	127,124	135,130
Not allocated to function(a) . . . . .	—990	726	—31,202	35,474	—3,704
<b>Total net advances . . . . .</b>	<b>136,295</b>	<b>169,806</b>	<b>109,981</b>	<b>174,544</b>	<b>150,147</b>

(a) Comprised mainly of States' deposits with the National Debt Sinking Fund.  
Minus sign (—) denotes excess of repayments.

Details of some of the more important State projects for which the Commonwealth is providing financial assistance by way of advances are set out below.

**Development of resources and assistance to industry**

*Water resources projects*

*Blowering Reservoir, New South Wales.* The Blowering Reservoir was constructed at the expense of the State of New South Wales mainly by the Snowy Mountains Hydro-electric Authority, and the Commonwealth has financed half the cost in the form of repayable interest-bearing loans to that State.

Under the *Western Australia (South-west Region Water Supplies) Agreement Act 1965*, the Commonwealth is providing financial assistance of up to \$10,500,000 by way of interest-bearing loans to Western Australia to accelerate works undertaken by the State to extend the comprehensive water supply scheme in the south-west portion of the State.

*Chowilla and Dartmouth Reservoirs.* Under the River Murray Waters Agreement the Commonwealth provided assistance in the form of interest-bearing loans amounting to \$1,500,000 to meet the capital costs of the Chowilla Reservoir. Because of significant increases in the estimated cost of the project, it was decided in August 1967 to suspend work on it. Further investigations then followed, including a re-assessment of the likely yield from both Chowilla and alternative storages on the Upper Murray and Mitta Mitta Rivers. Following careful consideration of this re-assessment, the River Murray Commission in February 1969 agreed that a 3,000,000 acre feet storage at Dartmouth on the Mitta Mitta River provided the greatest overall benefits in terms of cost and yield and should be the next development of the resources of the River Murray. The estimated cost of the Dartmouth Dam is \$57 million, and the Commonwealth is making advances to the three States concerned (New South Wales, Victoria and South Australia) amounting to fifty per cent of each of their one-quarter share of the construction costs. The Commonwealth itself will make its own quarter contribution of the cost of the project. (Further information can be found in Chapter 23, Water Conservation and Irrigation).

#### *Rural industries development projects*

*Brigalow lands.* Under the Brigalow Lands Agreement Acts, Commonwealth advances to the State of Queensland for specified works associated with the production of beef cattle and other primary products in the Fitzroy River Basin and the supply of beef for export were fixed at an overall limit of \$23 million. Repayments over a twenty-year period commenced in 1968 in respect of advances made prior to 1 July 1967 and in 1971 in respect of advances made after 1 July 1967.

*Softwood forestry.* The *Softwood Forestry Agreement Act 1967* authorised the Commonwealth to provide assistance during the five years ending 30 June 1971 for increased planting of softwood forests. Total assistance of the order of \$20 million is in the form of interest-bearing loans repayable over twenty-five years.

#### *Transport and communication*

*Railway projects.* The Commonwealth is continuing to make advances to South Australia and Western Australia to finance 30 per cent of the cost associated with railway standardisation in those States. In 1971-72, \$2.5 million was made available to Tasmania to finance railway extensions and up-grading in that State.

*Natural gas pipeline, South Australia.* Under the *Natural Gas Pipeline (South Australia) Agreement Act 1967* the Commonwealth is providing a maximum of \$15 million by way of interest-bearing loans to help finance the construction of a pipeline to transport gas from natural gas fields at Gidgealpa and Moomba.

*Weipa development, Queensland.* Under the *Weipa Development Agreement Act 1965* the Commonwealth provided financial assistance of \$3,270,000 during 1965-66 and 1966-67 to Queensland by way of interest-bearing advances to finance harbour works carried out at Weipa on Cape York Peninsula.

#### *Power, fuel and light*

The *Tasmania Agreement (Hydro-Electric Power Development) Act 1968* provided for interest-bearing loans with an overall limit of \$47 million to Tasmania for the financing of a five-year programme of accelerated hydro-electric development based on the commencement of development of the Gordon River area in the south west of the State.

## **Main components of receipts**

The main components of the receipts of Commonwealth authorities are taxation, surplus of public enterprises and other factor income transfers, and borrowing and financing transactions. Taxation constitutes by far the major source of receipts. Borrowing is now of minor significance so far as Commonwealth authorities are concerned, although, as may be seen in later tables, it has become an increasingly significant source of funds for the States. The realisation of the increasing commitment of State revenues to the servicing of a rapidly growing debt burden led to the arrangement agreed to at the 1970 Premiers' Conference whereby the Commonwealth now makes interest-free capital grants to the States in lieu of moneys previously obtained by the States from borrowings (see page 550).

In what follows, an account is given of the system of Commonwealth taxation, and some details are given of the current operations of Commonwealth public enterprises. Borrowing and other financing activities of Commonwealth authorities are dealt with for convenience in a later section relating to the debt of all public authorities.

**Commonwealth taxation—summary**

The following tables show Commonwealth taxation receipts classified by type of tax for the years 1966–67 to 1970–71, and the proportion of each type to total collections.

**COMMONWEALTH AUTHORITIES: TAXATION BY TYPE OF TAX**  
**1966-67 TO 1970-71**  
 (\$'000)

Type of tax	1966-67	1967-68	1968-69	1969-70	1970-71
<b>Income tax—</b>					
Individuals . . . . .	1,920,603	2,175,249	2,377,407	2,854,857	3,174,983
Companies(a) . . . . .	781,925	833,042	1,000,721	1,144,822	1,383,051
Dividend (withholding) . . . . .	22,708	21,716	28,303	38,003	35,956
Interest (withholding) . . . . .	..	910	4,456	8,019	12,318
<b>Total income taxes</b> . . . . .	<b>2,725,236</b>	<b>3,030,917</b>	<b>3,410,887</b>	<b>4,045,701</b>	<b>4,606,308</b>
Estate duty . . . . .	41,534	54,717	60,726	71,332	70,101
Gift duty . . . . .	7,658	8,543	9,376	8,553	7,795
Rates on land . . . . .	1,184	1,045	1,069	1,296	2,051
Customs duties . . . . .	274,873	312,220	346,264	413,559	465,989
Excise duties . . . . .	806,448	855,168	902,307	939,283	1,053,460
Sales tax . . . . .	380,657	416,626	494,090	568,668	632,537
Primary production taxes . . . . .	30,760	31,649	33,674	33,133	27,300
<b>Licences and registration fees n.e.i.—</b>					
Broadcasting listeners' and television viewers' licences . . . . .	37,835	39,182	45,125	48,389	49,563
Broadcast station licences . . . . .	209	299	310	345	341
Television station licences . . . . .	963	1,144	1,392	1,491	1,647
Other . . . . .	1,491	1,697	2,152	2,339	3,211
<b>Total licences, etc.</b> . . . .	<b>40,498</b>	<b>42,322</b>	<b>48,979</b>	<b>52,564</b>	<b>54,762</b>
Stevedoring industry charge . . . . .	9,758	14,259	14,480	13,801	13,242
Payroll tax . . . . .	172,232	184,416	205,568	230,469	247,677
Other taxes, fees, fines, etc. . . . .	1,589	1,769	2,294	3,424	3,932
<b>Total taxation</b> . . . . .	<b>4,492,427</b>	<b>4,953,651</b>	<b>5,529,714</b>	<b>6,381,783</b>	<b>7,185,154</b>
of which—					
Taxes levied in the Territories only . . . . .	2,971	3,029	3,589	5,599	7,650

(a) Excludes income tax paid by public enterprises: 1966–67, \$2.6m; 1967–68, \$3.6m; 1968–69, \$5.8m; 1969–70, \$6.5m; 1970–71, \$12.3m.

**COMMONWEALTH AUTHORITIES: PROPORTION OF EACH TYPE OF TAX TO**  
**TOTAL TAXATION, 1966-67 TO 1970-71**  
 (Per cent)

Type of tax	1966-67	1967-68	1968-69	1969-70	1970-71
Income tax . . . . .	60.7	61.2	61.7	63.4	64.1
Estate duty . . . . .	0.9	1.1	1.1	1.1	1.0
Gift duty . . . . .	0.2	0.2	0.2	0.1	0.1
Rates on land . . . . .	..	..	..	..	..
Customs duties . . . . .	6.1	6.3	6.3	6.5	6.5
Excise duties . . . . .	18.0	17.3	16.3	14.7	14.7
Sales tax . . . . .	8.5	8.4	8.9	8.9	8.8
Primary production taxes . . . . .	0.7	0.6	0.6	0.5	0.4
Licences and registration fees n.e.i. . . . .	0.9	0.9	0.9	0.8	0.8
Stevedoring industry charge . . . . .	0.2	0.3	0.3	0.2	0.2
Payroll tax . . . . .	3.8	3.7	3.7	3.6	3.4
Other taxes, fees, fines, etc. . . . .	..	..	..	..	0.1
<b>Total taxation</b> . . . . .	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Taxes on income**

A description of the development of income taxes in Australia appeared in Year Book No. 35, page 926. Since July 1942 the Commonwealth, under the uniform tax arrangement, has been the only authority imposing taxes on income.



The laws dealing with the assessment and imposition of Income tax at 30 June 1971 were—*Income Tax Assessment Act 1936–1971*, *Income Tax Act 1970*, *Income Tax (Partnerships and Trusts) Act 1970*, *Income Tax (Non-Resident Dividends and Interest) Act 1967*, *Income Tax (Drought Bonds) Act 1969*, and the *Income Tax Regulations*. The second-mentioned Act is an annual measure, and its primary purpose is to declare the rates of tax payable for the financial year.

Both individuals and companies are liable for income tax. Private companies are subject to tax on undistributed income in addition to the primary income tax levied on all companies.

The operation of the *Income Tax Assessment Act 1936–1971* is affected by the following Acts:

- (a) *Taxation Administration Act 1953–1968*, which provides for the administration of certain Acts relating to taxation;
- (b) *Income Tax (International Agreements) Act 1953–1969* which gives the force of law to comprehensive double taxation agreements between the Commonwealth and the Governments of the United Kingdom, the United States of America, Canada, New Zealand, Singapore and Japan. This Act also gives the force of law to an agreement with the Government of France for the avoidance of double taxation on income derived from international air transport;
- (c) *Diplomatic Privileges and Immunities Act 1967* which provides for the exemption from income tax of certain income of diplomatic representatives, their staff and families.
- (d) *International Organisations (Privileges and Immunities) Act 1963–1966*, and Regulations made under that Act, which provide for exemption from income tax of certain incomes of international organisations and their officials;
- (e) *Loan (Drought Bonds) Act 1969* which authorises the issue of drought bonds and empowers the Commissioner of Taxation to declare when drought bonds shall become redeemable.

Individuals, partnerships and trusts, non-profit companies with total income in excess of \$416 and all other companies deriving income are required to lodge returns of income each year.

Where applicable, income tax payable is assessed and assessment notices showing the amounts payable are issued during the year following the year of income. For individuals the approximate amount payable, however, has already been collected during the income year (from employees by deductions from salary or wages and from non-employees by a provisional tax). The amount shown on the assessment notice is therefore adjusted against the amount already paid and any difference either collected or refunded.

### Taxes on income—individuals

#### *Pay-as-you-earn system*

*Salary and wage earners* are subject to tax instalment deductions by employers according to a prescribed scale which shows the amount to be deducted according to income and number of dependants. Under the group employer scheme of deduction (covering most employers of more than ten persons), the amount deducted is required to be regularly remitted to the Commonwealth Taxation Office.

Not later than 14 July each year employers are required to supply each employee with a group certificate showing amount earned and deductions made during the year ended 30 June.

Under the stamp scheme used by employers, other than group employers, a stamp deduction sheet in two parts is used. Each four weeks the employer purchases stamps (also in two parts) for the amount of deductions made each pay day and sticks one part on each half of the sheet. At the end of the year the employer gives the employee one half of the sheet and sends the other half to the Taxation Office. The employee's half is then used in the same way as a group certificate.

*Individuals with taxable income of \$400 or more from other than salary or wages* may be required to pay provisional tax in respect of that income. Collection of provisional tax for the current year is made at the same time as collection and assessment for the previous year are adjusted. The notice of assessment shows an amount of provisional tax for the current year. The provisional amount is intended as an approximation to the tax which will be assessed after the return of income for the current year has been lodged. It is ascertained by assuming that the income of the current year will be the same as that for the previous year and applying to that income the rates for the current year. The assessment notice shows the provisional tax paid in the previous year as a credit against the tax assessed on the basis of the return for that year.

#### *Assessable income*

Assessable income includes all income, other than exempt income, derived directly or indirectly from sources in Australia and, in the case of resident taxpayers, includes income from sources outside Australia.

Income includes certain other receipts declared by the Assessment Act to be assessable income. Receipts such as gifts (other than gratuities received by an employee from his employer in the course of his employment), legacies, profits from the sale of property (not acquired for the purpose of profit making by sale), lottery wins, and most capital gains are not regarded as income and are not assessable.

Certain types of income are exempt from tax, the more important being (i) war and service pensions (ii) age and invalid pensions, child endowment and other payments under the *Social Services Act* 1947-1972 and the *Tuberculosis Act* 1948, (iii) income from gold-mining and some other mining operations, (iv) twenty per cent of certain mining profits, (v) dividends paid out of exempt mining profits, (vi) income received from a scholarship, bursary or other educational allowance, (vii) income of certain non-profit institutions and mutual income of some other organisations, (viii) income of specified superannuation funds, (ix) pay, allowances and bounties for part-time duty, and gratuity payable on a call out for continuous full-time service of members of the Defence Force Emergency Reserves, and (x) pay and allowances of members of the Defence Forces while allotted for duty in special areas (e.g. part of Borneo and adjacent waters, and South Vietnam).

Expenditure incurred in producing assessable income or in carrying on a business is an allowable deduction, except to the extent that it is of a capital, private, or domestic nature, or is incurred in producing exempt income. Subscriptions to certain business associations and trade union dues are also allowable deductions.

Special deductions for both resident and non-resident taxpayers include such items as trading losses incurred in previous years, bad debts, depreciation, annual rates and land taxes paid, gifts to various institutions, certain expenditure on scientific research, and, subject to certain conditions, one-third of amounts paid as calls to mining, prospecting, oil prospecting, or afforestation companies operating in Australia. In lieu of the one-third deduction for calls, capital subscribed to companies engaged in exploration or mining for petroleum and certain other minerals in Australia or Papua New Guinea may, in certain circumstances, be deductible in full.

Special deductions may be allowed for certain expenditure of a capital nature incurred in mining or prospecting operations conducted for the purpose of earning assessable income and in the provision of certain transport facilities necessary for and directly related to those operations. In the case of primary producers certain developmental expenditure of a capital nature may be deducted. Deductions in addition to depreciation are allowed to manufacturers (except for equipment purchased during the period 4 February 1971 to 13 February 1972 inclusive) and primary producers by way of an investment allowance for expenditure on specified plant and equipment. In addition, deductions may be allowed to primary producers for the cost of purchasing drought bonds. Subject to a maximum permissible tax saving, a special rebate is allowed for certain expenditure on export market development. The rebate is in addition to any normal deduction for the expenditure allowed as a business expense.

Residents of Zone A and Zone B, prescribed isolated areas subject to uncongenial climatic conditions and high costs of living are entitled to a zone allowance deduction. Members of the defence forces serving in certain overseas localities, are entitled to a deduction of the same amount as residents of Zone A.

### *Concessional deductions*

Concessional allowances to residents for dependants, medical and dental expenses, life insurance, superannuation contributions, etc. are made as a deduction from income. The maximum deduction allowed for the income year 1971-72 for each dependant or for a housekeeper is shown below.

<i>Dependant, etc. (resident)</i>	<i>Maximum deduction(a)</i>
	\$
Spouse, Daughter-housekeeper(b); housekeeper(c); Parent or parent-in-law	312
One child under 16 years of age; Invalid relative(d); Student child 16 to under 25 years of age	208
Other children under 16 years of age	156

(a) If the dependant is maintained for part only of the year, a partial deduction is allowed. (b) Of a widower or widow  
(c) Caring for a spouse in receipt of an invalid pension, or caring for children under 16 years of age of a widower or widow.  
(d) Child, step-child, brother or sister over 16 years of age.

If a dependant derives separate net income, which includes age or invalid pension but not child endowment, the deduction is reduced by the amount, by which the separate net income exceeds \$130. Scholarships are excluded except insofar as they relate to maintenance.

Medical expenses (less amounts recouped from hospital and medical funds) paid by a resident taxpayer in respect of himself, his spouse, children under 21 years of age and dependants for whom concessional deductions are allowed, are allowed as a concessional deduction. These expenses include payments to a legally qualified medical practitioner, dentist, nurse or chemist, or hospital, in respect of an illness or operation, therapeutic treatment or eye tests, expenditure on medical or surgical appliances, artificial limbs or eyes, hearing aids and spectacles, payment of an attendant of a blind or bed-ridden person or for the maintenance of a trained dog used by a blind person.

Other concessional deductions allowed to resident taxpayers include: (i) payments of life insurance premiums and contributions to superannuation funds and friendly societies, (maximum \$1,200), (ii) payments to medical or hospital funds, (iii) funeral expenses (maximum \$100 for each dependant), (iv) expenditure incurred for the full-time education of children less than twenty-five years of age (maximum \$400 for each child), and (v) subscriptions to trade, business or professional associations or unions (maximum \$42 to each).

#### *Effective exemption from tax*

For the income years from 1963–64 onwards the income of a taxpayer without dependants was exempt from income tax if it did not exceed \$416. The effect of deductions for dependants was to exempt resident taxpayers up to the incomes shown in the samples hereunder.

#### RESIDENT TAXPAYERS: EFFECTIVE EXEMPTIONS FROM INCOME TAX

(\$)

Income years ended June—	Taxpayer with—		Wife and—			
	No dependants	Wife only	one child	two children	three children	four children
1964 to 1967 . . .	416	702	884	1,014	1,144	1,274
1968 to 1972 . . .	416	728	936	1,092	1,248	1,404

Special provisions applying for the 1971–72 income year to *resident aged persons* (i.e. men aged 65 years or more or women aged 60 years or more) were:

#### (A) *Single Persons Age Allowance Provisions*

Taxable Income \$	
Up to 1,326	No income tax payable
<i>Income Tax limited to:</i>	
1,327–1,532	16½ per cent of taxable income over \$1,326
1,533–2,080	\$34.33 plus 18 per cent of taxable income over \$1,532
2,081–2,132	\$132.97 plus 45 per cent of taxable income over \$2,080
2,133–2,286	\$156.37 plus 66½ per cent of taxable income over \$2,132

#### (B) *Married Couples Age Allowance Provisions*

Combined Taxable Income(a) \$	
Up to 2,314	No income tax payable
<i>Income Tax limited to:</i>	
2,315–2,500	16½ per cent of taxable income over \$2,314
2,501–3,000	\$31.00 plus 31 per cent of taxable income over \$2,500
3,001–3,640	\$186.00 plus 40 per cent of taxable income over \$3,000
3,641–3,744	\$442.00 plus 45 per cent of taxable income over \$3,640
3,745–4,155	\$488.80 plus 66½ per cent of taxable income over \$3,744

(a) Where a spouse has no taxable income the 'combined taxable income' is regarded as equal to the taxable income of the taxpayer.

NOTE. Income tax calculated under age allowance provisions is not subject to the levy, payable under the ordinary rates of tax.

#### *Rates of income tax on individuals*

The table on page 560 shows the rates of income tax for income years 1954–55 to 1971–72 as set out in the First Schedule to the Income Tax Act.

Assessable income represents total actual income minus exempt income. Taxable income is the amount remaining after all allowable deductions have been made on assessable income.

The minimum amount of income tax payable is 50c.

Where the taxable income of a person does not exceed \$428 the amount of income tax payable is limited to 45 per cent of the excess of the taxable income over \$416. The tax so ascertained was increased by 4.375 per cent for the 1971–72 income year.



The only cases in which incomes below \$416 attract tax are those for which special rates are payable in accordance with the provisions of the *Income Tax (Partnerships and Trusts) Act 1970*.

For *primary producers* the rate of income tax for the current year is, in general, determined by the average of the taxable incomes for the five years up to and including the current year. In 1951 a taxpayer was given the right to elect not to have the averaging provisions applied but up to 1965-66 income year the election, if made under then existing legislation, was irrevocable. The *Income Tax Assessment Act 1966* amended this and a primary producer who, prior to the 1966-67 income year, elected to withdraw from the averaging system, was able to review that decision, being permitted to return to the averaging system provided that the necessary election was made in respect of any one of the income years 1966-67 to 1969-70. In the year of re-entry the taxpayer would be treated for averaging purposes as though he had never withdrawn from the system. However, with existing legislation, he will not have the right to withdraw again. The application of the averaging provisions is limited to that part of the taxable income which does not exceed \$16,000. When the taxable income does exceed \$16,000, the balance is taxed at ordinary rates applicable to that part. When the taxable income is less than \$16,000, the rate of tax for averaging purposes is limited to the rate on a taxable income of \$16,000.

The taxable income, including abnormal receipts, of *actors, artists, inventors*, etc. is taxed at the rate appropriate to the normal taxable income plus one-third of the abnormal receipts.

Interest derived from bonds, etc. issued between 1 January 1940 and 31 October 1968 by the Commonwealth, or on certain State semi-government loans issued free of State income tax, is subject to a rebate of income tax of 10 cents for each \$1 of interest received. The rebate does not apply to interest received from bonds, etc., issued on or after 1 November 1968.

#### COMMONWEALTH INCOME TAX—INDIVIDUALS: GENERAL RATES, 1954-55 TO 1971-72 INCOME YEARS

Total taxable income		1954-55 to 1964-65(a)		1965-66 to 1969-70(b)		1970-71 to 1971-72(c)	
Column 1	Column 2	Tax on amount in column 1	Tax on each \$ of balance of income	Tax on amount in column 1	Tax on each \$ of balance of income	Tax on amount in column 1	Tax on each \$ of balance of income
Exceeding	Not exceeding						
\$	\$	\$	cents	\$	cents	\$	cents
Nil	200	Nil	0.42	Nil	0.40	Nil	0.30
200	300	0.83	1.25	0.80	1.20	0.60	1.20
300	400	2.08	2.92	2.00	2.90	1.80	2.70
400	500	5.00	4.58	4.90	4.50	4.50	4.10
500	600	9.58	6.25	9.40	6.10	8.60	5.50
600	800	15.83	8.33	15.50	8.20	14.10	7.40
800	1,000	32.50	10.83	31.90	10.80	28.90	9.70
1,000	1,200	54.17	12.50	53.50	12.50	48.30	11.30
1,200	1,400	79.17	14.17	78.50	14.20	70.90	12.80
1,400	1,600	107.50	15.83	106.90	15.90	96.50	14.30
1,600	1,800	139.17	17.50	138.70	17.60	125.10	15.80
1,800	2,000	174.17	19.17	173.90	19.30	156.70	17.30
2,000	2,400	212.50	21.67	212.50	21.60	191.30	19.50
2,400	2,800	299.17	24.58	298.90	24.60	269.30	22.10
2,800	3,200	397.50	27.08	397.30	27.10	357.70	24.40
3,200	3,600	505.83	29.58	505.70	29.60	455.30	26.70
3,600	4,000	624.17	32.08	624.10	32.10	562.10	28.80
4,000	4,800	752.50	35.42	752.50	35.40	677.30	31.90
4,800	5,600	1,035.83	38.33	1,035.70	38.30	932.50	34.50
5,600	6,400	1,342.50	41.25	1,342.10	41.20	1,208.50	37.00
6,400	7,200	1,672.50	43.75	1,671.70	43.80	1,504.50	39.40
7,200	8,000	2,022.50	46.25	2,022.10	46.30	1,819.70	41.70
8,000	8,800	2,392.50	48.75	2,392.50	48.70	2,153.30	43.90
8,800	10,000	2,782.50	51.67	2,782.10	51.70	2,504.50	46.50
10,000	12,000	3,402.50	55.00	3,402.50	55.00	3,062.50	50.60
12,000	16,000	4,502.50	57.92	4,502.50	57.90	4,074.50	56.40
16,000	20,000	6,819.17	60.42	6,818.50	60.40	6,330.50	62.40
20,000	32,000	9,235.83	63.33	9,234.50	63.30	8,826.50	66.70
32,000	upwards	16,835.83	66.67	16,830.50	66.70		

(a) For the 1959-60 and 1961-62 to 1963-64 income years a rebate of 5 per cent was allowable on the tax calculated from this schedule. (b) Additional tax equal to 2.5 per cent of the tax calculated from this schedule was also payable. (c) Additional tax equal to 2.5 per cent and 4.375 per cent of the tax calculated from this schedule was also payable for 1970-71 and 1971-72 respectively.



*Income tax payable on specified incomes*

The following table shows, for the income years 1961-62 to 1971-72, the actual income tax payable by taxpayers with various incomes and numbers of dependants without regard to any rebate or refund which may apply.

**COMMONWEALTH INCOME TAX PAYABLE ON SPECIFIED INDIVIDUAL INCOMES  
1961-62 TO 1971-72 INCOME YEARS**

(\$)

Income(a) \$	1961-62 to 1963-64	1964-65	1965-66 and 1966-67	1967-68 to 1969-70	1970-71	1971-72
<b>TAXPAYER WITH NO DEPENDANTS</b>						
1,000 . . .	51.50	54.20	54.83	54.83	49.50	50.41
2,000 . . .	201.90	212.50	217.81	217.81	196.08	199.67
3,000 . . .	429.10	451.70	462.78	462.78	416.66	424.28
4,000 . . .	714.90	752.50	771.31	771.31	694.23	706.93
5,000 . . .	1,056.90	1,112.50	1,140.10	1,140.10	1,026.53	1,045.32
10,000 . . .	3,232.40	3,402.50	3,487.56	3,487.56	3,139.06	3,196.48
20,000 . . .	8,774.00	9,235.80	9,465.36	9,465.36	9,047.16	9,212.66
<b>TAXPAYER WITH DEPENDENT WIFE</b>						
1,000 . . .	24.00	25.30	25.45	23.27	21.12	21.51
2,000 . . .	151.10	159.10	162.72	158.02	142.47	145.08
3,000 . . .	357.60	376.40	385.53	378.97	341.26	347.51
4,000 . . .	627.70	660.70	677.20	668.64	602.12	607.13
5,000 . . .	955.10	1,005.38	1,030.37	1,020.95	919.18	936.00
10,000 . . .	3,092.00	3,254.70	3,335.99	3,322.21	2,990.35	3,045.06
20,000 . . .	8,609.90	9,063.00	9,288.29	9,272.20	8,847.60	9,009.45
<b>TAXPAYER WITH DEPENDENT WIFE AND ONE CHILD</b>						
1,000 . . .	11.00	11.60	11.63	8.71	7.97	8.12
2,000 . . .	122.00	128.40	131.06	122.61	110.63	112.66
3,000 . . .	315.00	331.60	339.65	326.54	294.15	299.54
4,000 . . .	573.80	604.00	619.06	603.29	543.31	553.25
5,000 . . .	893.90	940.91	964.33	945.48	851.18	866.75
10,000 . . .	3,002.70	3,160.70	3,239.55	3,212.00	2,891.21	2,944.11
20,000 . . .	8,505.40	8,953.10	9,175.61	9,143.43	8,714.57	8,873.98
<b>TAXPAYER WITH DEPENDENT WIFE AND TWO CHILDREN</b>						
1,000 . . .	4.80	..	..	..	..	..
2,000 . . .	102.40	107.80	109.88	98.49	88.93	90.57
3,000 . . .	284.70	299.70	306.87	289.54	260.84	265.61
4,000 . . .	537.30	565.60	579.62	555.95	500.61	509.77
5,000 . . .	850.20	894.88	917.16	888.86	800.16	814.80
10,000 . . .	2,938.80	3,093.50	3,170.66	3,129.32	2,816.86	2,868.39
20,000 . . .	8,430.80	8,874.50	9,095.13	9,046.84	8,614.78	8,772.37

(a) Income remaining after allowing all deductions other than deductions for dependants.

*Income tax assessments—Individuals*

The following table shows for the 1969-70 income year the number of taxpayers, income, and net income tax assessed for individuals. For further information see the annual bulletin *Commonwealth Taxation Assessments*.

**COMMONWEALTH INCOME TAX ASSESSMENTS(a): TAXABLE INDIVIDUALS  
BY GRADE OF ACTUAL INCOME AND BY OFFICE OF ASSESSMENT**  
(Income derived in the year 1969-70)

Grade of actual income(b) and office of assessment	Taxpayers			Actual income(b)	Total taxable income(c)	Net income tax assessed
	Males	Females	Total			
\$        \$	No.	No.	No.	\$'000	\$'000	\$'000
417- 599 . . .	43,315	88,564	131,879	67,847	65,201	1,341
600- 799 . . .	56,545	115,164	171,709	119,943	111,519	3,546
800- 999 . . .	54,538	112,582	167,120	150,432	137,593	6,132
1,000- 1,199 . . .	60,678	123,593	184,271	202,444	182,109	10,152
1,200- 1,399 . . .	67,361	128,040	195,401	254,097	226,609	14,966
1,400- 1,599 . . .	73,775	136,048	209,823	314,879	280,060	20,841
1,600- 1,799 . . .	78,832	149,497	228,329	388,316	344,869	28,848
1,800- 1,999 . . .	84,391	153,307	237,698	451,593	399,615	37,139
2,000- 2,199 . . .	97,143	149,526	246,669	517,658	454,579	46,192
2,200- 2,399 . . .	114,035	129,959	243,994	561,190	487,094	53,614
2,400- 2,599 . . .	133,709	110,120	243,829	609,352	521,174	61,193
2,600- 2,799 . . .	155,315	89,337	244,652	660,063	555,340	68,720
2,800- 2,999 . . .	172,430	66,802	239,232	693,601	573,481	74,007
3,000- 3,999 . . .	926,998	173,361	1,100,359	3,827,933	3,072,054	450,391
4,000- 5,999 . . .	962,473	98,349	1,060,822	5,072,276	3,973,556	737,150
6,000- 7,999 . . .	248,156	27,388	275,544	1,873,281	1,462,127	344,938
8,000- 9,999 . . .	78,796	10,596	89,392	789,502	627,996	175,662
10,000-19,999 . . .	75,781	11,193	86,974	1,134,334	944,008	337,285
20,000-29,999 . . .	9,271	1,191	10,462	247,346	216,289	100,958
30,000 and over . . .	3,778	564	4,342	223,218	186,552	105,141
New South Wales . . .	1,272,913	696,700	1,969,613	6,786,084	5,596,554	1,020,043
Victoria . . .	983,986	557,822	1,541,808	5,311,060	4,347,505	808,038
Queensland . . .	474,977	227,210	702,187	2,244,833	1,781,689	303,353
South Australia . . .	327,859	172,096	499,955	1,564,783	1,271,632	213,363
Western Australia . . .	277,802	142,285	420,087	1,423,156	1,161,175	213,781
Tasmania . . .	107,393	50,449	157,842	504,007	402,083	67,114
Northern Territory . . .	16,415	6,617	23,032	91,494	67,287	12,577
Australian Capital Territory . . .	35,975	22,002	57,977	233,888	193,899	39,947
<b>Total residents . . .</b>	<b>3,497,320</b>	<b>1,875,181</b>	<b>5,372,501</b>	<b>18,159,305</b>	<b>14,821,824</b>	<b>2,678,215</b>

(a) Assessments in respect of 1969-70 incomes issued to 30 September 1971. Assessments issued after that date are not included. (b) Actual income is 'gross income including exempt income less expenditure incurred in gaining that income'. (c) Taxable income is the income remaining after deducting from assessable income all allowable deductions.

Details of the number of individual taxpayers and net income tax assessed by grades of actual income for the income years 1966-67 to 1969-70 are shown in the following table.

**COMMONWEALTH INCOME TAX ASSESSMENTS: TAXABLE INDIVIDUALS, BY GRADE OF ACTUAL INCOME(a) (INCOME YEARS 1966-67 TO 1969-70)**

Grade of actual income(a)	1966-67			1967-68			1968-69			1969-70		
	Tax-payers		Net income tax assessed	Tax-payers		Net income tax assessed	Tax-payers		Net income tax assessed	Tax-payers		Net income tax assessed
\$	\$	No.	\$'000	No.	\$'000	No.	\$'000	No.	\$'000	No.	\$'000	\$'000
417-	599	134,068	1,431	134,704	1,394	134,711	1,419	131,879	1,341			
600-	799	171,671	3,562	168,835	3,538	170,067	3,513	171,709	3,546			
800-	999	196,995	7,100	185,282	6,735	172,464	6,300	167,120	6,132			
1,000-	1,199	231,968	12,641	211,874	11,667	195,168	10,726	184,271	10,152			
1,200-	1,399	243,793	18,526	225,458	17,154	209,838	16,025	195,401	14,966			
1,400-	1,599	271,943	27,385	251,307	25,529	227,948	23,024	209,823	20,841			
1,600-	1,799	276,844	35,234	262,645	33,706	249,636	32,133	228,329	28,848			
1,800-	1,999	264,304	40,321	263,449	41,086	255,666	40,471	237,698	37,139			
2,000-	2,199	270,010	47,865	260,314	47,376	254,745	47,353	246,669	46,192			
2,200-	2,399	274,637	55,529	264,375	54,716	252,492	53,978	243,994	53,614			
2,400-	2,599	280,725	63,381	266,897	61,351	251,953	60,635	243,829	61,193			
2,600-	2,799	276,502	70,252	268,846	69,089	253,298	67,734	244,652	68,720			
2,800-	2,999	262,004	75,065	259,102	73,871	249,701	74,441	239,232	74,007			
3,000-	3,999	922,098	351,613	1,004,324	383,872	1,071,041	422,246	1,100,359	450,391			
4,000-	5,999	591,665	394,361	684,994	452,851	877,382	592,593	1,060,822	737,150			
6,000-	7,999	140,914	179,821	160,057	199,938	215,473	265,319	275,544	344,938			
8,000-	9,999	51,490	105,428	56,320	113,046	72,232	140,613	89,392	175,662			
10,000-	19,999	55,535	223,020	60,388	239,877	75,568	289,976	86,974	337,285			
20,000-	29,999	6,295	63,229	7,125	70,193	8,845	85,481	10,462	100,958			
30,000 and over		2,524	58,389	3,127	78,303	3,601	82,470	4,342	105,141			
Total	4,925,985	1,834,154	4,999,423	1,985,293	5,201,829	2,316,451	5,372,501	2,678,215				

(a) Actual income is 'gross income including exempt income less expenditure incurred in gaining that income.'

### Partnerships and trusts

Income tax returns are required to be lodged on behalf of partnerships and trusts which, as partnerships and trusts, are not required to pay tax except in certain specified circumstances when they may be assessed as individuals. In general, the net income remaining, after allowing all deductions including expenditure incurred in gaining the income, is distributed to the partners or beneficiaries concerned and is assessable for tax in the respective individual returns.

The following table shows for the 1969-70 income year numbers, total business income and net income of partnerships and trusts. Greater detail is published in annual bulletin *Commonwealth Taxation Assessments*.

**PARTNERSHIPS AND TRUSTS—INCOME YEAR 1969-70**

Item	Partnerships	Trusts	Total
Number	385,172	120,588	505,760
Total business income	\$'000 5,782,800	77,617	5,860,417
Net income	\$'000 1,879,825	209,243	2,089,068

### Taxes on income—companies

For taxation purposes companies are divided into two main groups—private and public. Broadly, a private company is defined as a company in which all the issued shares are held by not more than twenty persons, or which is capable of being controlled by not more than seven persons, and which is not a company in which the public is substantially interested, or is a subsidiary of a public company. All other companies are regarded as public companies. Both private and public companies pay primary tax assessed on a taxable income ascertained on the same principles as for individuals.

Dividends received are assessable income; resident companies, however, receive a rebate at the average rate on the amount of dividends included in the taxable income, while this rebate is not allowed to non-resident companies.

A private company is liable to pay additional tax upon the amount, if any, by which the dividends paid by the company within a prescribed period fall short of sufficient distribution as defined.

*Rates of tax.* The rates of primary income tax for all companies and additional tax for private companies applicable to income years 1959–60 to 1970–71 are shown in the following table.

RATES OF INCOME TAX: COMPANIES, 1959-60 TO 1970-71 INCOME YEARS

(Cents per \$)

Income years ended June	Resident private company			Resident public company(a)		Non resident company			
	On taxable income		Additional tax on un- distributed income	On taxable income		On dividends income		On other income	
	Up to \$10,000	On re- mainder		Up to \$10,000	On re- mainder	Up to \$10,000	On re- mainder	Up to \$10,000	On re- mainder
1960 to 1963	25	35	50	35	40	30	40	35	40
1964 to 1967	27.5	37.5	50	37.5	42.5	32.5	42.5	37.5	42.5
1968 and 1969	30	40	50	40	45	35	45	40	45
1970	32.5	42.5	50	42.5	47.5	37.5	47.5	42.5	47.5
1971	37.5	42.5	50	47.5	47.5	42.5	47.5	47.5	47.5

(a) Excludes co-operative, non-profit and life insurance for which the rates of tax (in cents per \$) for 1970–71 income year were:

Type of company	Taxable income	
	Up to \$10,000	On remainder
Co-operative	42.5	47.5
Non-profit—Friendly societies' dispensaries	37.5	37.5
Other	42.5	47.5
Mutual life insurance	37.5	42.5
Other life insurance—Mutual income	37.5	42.5
Other income	47.5	47.5

A non-profit company is not liable to income tax unless the taxable income exceeds \$416. Where the non-profit company is a friendly society dispensary and the taxable income does not exceed \$1,664 the maximum amount payable is one-half of the excess over \$416 less any rebate or credit to which the company is entitled. Where the taxable income of a non-profit company other than a friendly society dispensary does not exceed \$1,830, the tax payable by the company is limited to 55 per cent of the amount by which the taxable income exceeds \$416 less any rebate or credit to which the company is entitled. Other companies are assessed for income tax if the taxable income is \$1 or more.



Details in respect of company income tax assessments for the 1969-70 income year are shown in the following table.

**COMMONWEALTH INCOME TAX ASSESSMENTS: RESIDENT AND NON-RESIDENT COMPANIES, BY GRADE OF INCOME AND OFFICE OF ASSESSMENT**

(Income derived in the year 1969-70)

Grade of taxable income (a) (\$) and office of assessment	Taxable			Non-taxable		
	Companies	Taxable income (a)	Net income tax assessed (b)	Companies	Taxable income (a)(c)	Loss(d)
	No.	\$'000	\$'000	No.	\$'000	\$'000
Loss for year . . . . .	..	..	..	39,199	..	350,165
Nil . . . . .	..	..	..	18,535	..	..
1- 1,999 . . . . .	27,832	18,587	5,860	3,913	3,024	..
2,000- 9,999 . . . . .	35,612	198,479	61,426	4,688	23,399	..
10,000- 19,999 . . . . .	15,482	213,096	71,051	1,446	20,211	..
20,000- 39,999 . . . . .	8,165	227,691	81,604	757	20,841	..
40,000- 99,999 . . . . .	5,342	327,756	122,340	439	26,711	..
100,000- 199,999 . . . . .	1,992	279,594	105,719	169	22,634	..
200,000- 399,999 . . . . .	1,093	308,243	116,293	83	22,700	..
400,000- 999,999 . . . . .	729	449,640	158,964	40	21,899	..
1,000,000-1,999,999 . . . . .	258	352,855	123,153	8	10,316	..
2,000,000 and over . . . . .	263	1,606,107	579,145	9	42,736	..
New South Wales . . . . .	41,881	1,409,129	499,975	29,121	72,127	141,581
Victoria . . . . .	28,414	1,801,972	637,183	16,965	84,016	121,464
Queensland . . . . .	9,480	282,209	110,450	7,439	12,359	27,483
South Australia . . . . .	8,008	211,113	77,553	6,969	11,418	20,677
Western Australia . . . . .	5,291	187,443	73,009	4,727	6,108	30,136
Tasmania . . . . .	1,750	45,100	15,898	1,471	4,402	4,084
Northern Territory . . . . .	498	10,881	3,994	289	440	1,782
Australian Capital Territory . . . . .	1,446	34,201	7,493	2,305	23,603	2,956
<b>Total . . . . .</b>	<b>96,768</b>	<b>3,982,049</b>	<b>1,425,555</b>	<b>69,286</b>	<b>214,472</b>	<b>350,165</b>

(a) Taxable income is the income remaining after deducting from assessable income all allowable deductions. (b) Excludes additional tax on the undistributed income of private companies. (c) Net tax assessed is nil because of rebates. (d) Not included in the figures shown for taxable income.

**Yield of income taxes**

*Income taxes collected.* The following table shows the net amounts of taxes collected and the proportions of the several components in the years 1966-67 to 1970-71.

## COMMONWEALTH INCOME TAXES COLLECTED: COLLECTION YEARS 1966-67 TO 1970-71

Source of income tax	1966-67	1967-68	1968-69	1969-70	1970-71
NET AMOUNTS COLLECTED (\$'000)					
Individuals—					
Instalments—salaries and wages . . . . .	1,323,537	1,507,456	1,727,290	2,084,219	2,432,062
Other payments . . . . .	599,043	669,949	652,176	773,917	746,075
Companies . . . . .	784,544	836,664	1,006,543	1,151,364	1,395,389
Withholding tax—Dividend . . . . .	22,708	21,716	28,303	38,003	35,956
Interest . . . . .	..	910	4,456	8,019	12,318
<b>Total . . . . .</b>	<b>2,729,832</b>	<b>3,036,695</b>	<b>3,418,768</b>	<b>4,055,523</b>	<b>4,621,800</b>
PERCENTAGES					
Individuals—					
Instalments—salaries and wages . . . . .	48.48	49.64	50.52	51.39	52.62
Other payments . . . . .	21.94	22.06	19.08	19.08	16.14
Companies . . . . .	28.74	27.55	29.44	28.39	30.19
Withholding tax—Dividend . . . . .	0.83	0.72	0.83	0.94	0.78
Interest . . . . .	..	0.03	0.13	0.20	0.27
<b>Total . . . . .</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

*Income tax assessed.* The amounts of income tax covered by statistical analyses of assessments for recent years are shown in the following table. The amounts are shown under the year of income of the taxpayer. Tax is usually paid by companies in the year following the year of income. Individuals pay tax in the year of income, but there is usually an adjustment in the following year. Tax assessed after the close of the normal assessing period (fifteen months after the close of the income year for individuals and eighteen months for companies) is not included.

COMMONWEALTH INCOME TAXES ASSESSED: INCOME YEARS 1965-66 TO 1969-70  
(\$'000)

Tax	1965-66	1966-67	1967-68	1968-69	1969-70
Individuals—					
Residents . . . . .	1,608,256	1,834,154	1,985,293	2,316,451	} 2,678,215
Non-residents . . . . .	696	1,179	1,550	1,531	
Companies—					
Primary tax . . . . .	786,925	832,582	1,010,357	1,151,375	1,425,555
Additional tax on undistributed income of private companies . . . . .	2,618	2,934	6,648	4,384	n.a.
Superannuation Funds . . . . .	541	573	656	677	701
<b>Total . . . . .</b>	<b>2,399,036</b>	<b>2,671,422</b>	<b>3,004,504</b>	<b>3,474,418</b>	n.a.

*Refunds of revenue.* Income tax collections, as previously shown, are net amounts after refunds of revenue made in the course of the year. Refunds are of two types—those charged to special appropriations under authority of the Income Tax Assessment Act and those charged to special appropriations under authority of the Audit Act. Income tax instalment refunds, by far the greatest part of income tax refunds, are made when the instalments deducted during the year exceed the tax assessed on incomes for that year. Refunds made from special appropriations under section 37A of the Audit Act include refunds of moneys paid to the revenue in error, refunds of tax overpaid, refunds due to the amendment of assessments, etc. Refunds of income tax to individuals during the collection years 1966-67 to 1970-71 were: 1966-67, \$353,194,000; 1967-68, \$398,371,000; 1968-69, \$477,965,000; 1969-70, \$514,065,000; and 1970-71, \$594,748,000.

**Estate duty**

Under the *Estate duty Assessment Act* 1941–1970 estate duty is assessed on the net value of the estate less a statutory exemption determined in accordance with the following formula: (a) where the whole of the estate passes to the widow, widower, children (including adopted children, step-children and ex-nuptial children) or grandchildren of the deceased person: (i) for qualifying estates of deceased primary producers—\$24,000; (ii) for other estates—\$20,000; decreasing by \$2 for every \$8 by which the value of the estate exceeds \$24,000 or \$20,000 as the case may be; (b) where no part of the estate passes to the relatives mentioned in (a): (i) for qualifying estates of deceased primary producers—\$12,000; (ii) for other estates—\$10,000; decreasing by \$2 for every \$8 by which the value of the estate exceeds \$12,000 or \$10,000 as the case may be; and (c) where part only of the estate passes to the relatives mentioned in (a): an amount calculated proportionately under (a) and (b) above.

As a general rule, the estate of a deceased primary producer would qualify for the higher level of statutory exemption if: (i) the death occurred on or after 25 September 1969; (ii) the deceased person was domiciled in Australia at the time of his death; (iii) during the period of five complete income tax years preceding death, more than one-half of the deceased person's gross income was derived from the carrying on by him of a primary production business in Australia; and (iv) the gross value of rural property in Australia—being land and certain other types of assets used in a primary production business such as livestock and agricultural plant—exceeded the gross value of all other property in the estate. In specified circumstances, dividends and certain other receipts from a family proprietary company in which a deceased person held shares may be treated as income derived from the carrying on by him of a primary production business and the value of the shares may be included, either wholly or in part, in the value of the estate's rural property.

Special exemptions are also allowed in respect of estates of defence personnel who die on active service or within three years of termination of their active service from injuries received or diseases contracted while on active service, and prescribed personal property held in Australia by certain United States personnel who are in Australia solely for purposes connected with projects of the United States Government.

A 'quick succession' rebate of estate duty may be allowable if the deceased was a beneficiary in an estate (upon which duty is payable or has been paid) of a person who pre-deceased him by not more than five years.

A 'rural property' rebate of part of any estate duty attributable to rural property included in the estate of a deceased primary producer may be allowable if the value of the estate (before deducting any statutory exemption) is less than \$250,000 and certain conditions are satisfied. The conditions are the same as those governing entitlements to higher levels of statutory exemptions for estates of deceased primary producers, as outlined in the explanations relating to statutory exemptions. If the value of a qualifying estate does not exceed \$140,000, the rebate is fifty per cent of any duty attributable to rural property in Australia. Rates of rebate gradually reducing from fifty per cent are applicable to estates having net values between \$140,000 and \$250,000.

The rates of duty have remained unchanged since 1941 and increase as the value of the estate for duty increases, as follows: does not exceed \$20,000, 3 per cent; \$20,001 to \$40,000, 3 per cent to 6 per cent; \$40,001 to \$240,000, 6 per cent to 26 per cent; \$240,001 to \$1,000,000, 26 per cent to 27.9 per cent; \$1,000,000 or more, 27.9 per cent.

Particulars of the number and value of dutiable estates and duty assessed, for each of the assessment years 1966–67 to 1970–71 are given in the following table.

COMMONWEALTH ESTATE DUTY ASSESSMENTS, 1966-67 TO 1970-71

		1966-67	1967-68	1968-69	1969-70	1970-71
Estates . . . . .	No.	12,056	14,489	14,105	16,358	16,502
Gross value as assessed . . . . .	\$'000	664,034	840,226	841,462	1,068,213	993,610
Deductions(a) . . . . .	"	131,930	168,106	162,834	222,953	168,396
Statutory exemption . . . . .	"	127,602	155,800	152,206	170,755	179,419
Dutiable value . . . . .	"	404,502	516,320	526,422	674,504	645,791
Net duty assessed . . . . .	"	43,817	57,711	64,045	83,379	80,551
Average dutiable value . . . . .	\$	33,552	35,635	37,322	41,234	39,134
Average duty assessed per estate	\$	3,634	3,983	4,541	5,097	4,881

(a) Debts, Exempt Estate and State Probate Succession Duties.

### Gift duty

The *Gift Duty Act 1941-1966* and the *Gift Duty Assessment Act 1941-1967* impose a gift duty on gifts which are defined as dispositions of property made otherwise than by will, without adequate consideration in money or money's worth. There is a liability on both the donor and the donee to furnish a return, and both are jointly and severally liable for payment of the duty. However, if a return is furnished by the donor, the donee is relieved of this obligation.

Certain exemptions from duty are provided, the more important being: payments to an employees' superannuation or like fund; retiring allowances or gratuities granted to employees; gifts to organisations not carried on for the profit of any individual; gifts to the Commonwealth or a State; and small gifts not exceeding \$100.

The rate of gift duty applicable to any particular gift is fixed by reference to the total value of all gifts made by the same donor within the period of eighteen months before and eighteen months after the time of making that gift. Where the total value of all gifts as defined does not exceed \$4,000 no duty is payable; The present rates of duty are (a) \$4,001 to \$20,000, 3 per cent provided that the gift duty payable shall not exceed one half of the amount by which the gift exceeds \$4,000 or a proportionate amount where more than one gift is involved; (b) \$20,001 to \$40,000, 3 per cent to 6 per cent; (c) \$40,001 to \$240,000, 6 per cent to 26 per cent; (d) \$240,001 to \$1,000,000 and over, 26 per cent to 27.9 per cent.

Particulars of the number of gift duty assessments, value of gifts as assessed and duty assessed for each of the assessment years 1966-67 to 1970-71 are given in the following table.

COMMONWEALTH GIFT DUTY ASSESSMENTS, 1966-67 TO 1970-71

	1966-67	1967-68	1968-69	1969-70	1970-71
Assessments . . . No.	8,946	9,293	10,053	9,807	9,740
Value as assessed . . . \$'000	130,771	150,322	163,476	156,052	147,677
Duty assessed . . . „	7,633	8,701	9,501	8,399	7,796

### Australian Capital Territory Stamp Duty and Tax

*Stamp duty and tax* on a range of instruments and transactions connected with the Australian Capital Territory, including Jervis Bay, came into operation on 1 July 1969.

The *Australian Capital Territory Taxation (Administration) Act 1969* provides for the administrative procedures necessary for assessment and collection of duty and tax.

Six additional Acts specify the range of dutiable instruments or transactions subject to duty or tax which are as under:

*Cheques and other bills of exchange and promissory notes:* Five cents on each.

*Hire purchase agreements:* 1½ per cent of the purchase price (if over \$100) after excluding any deposit and any terms or insurance charges.

*Insurance business:* Five per cent of premiums other than for life assurance, third party motor vehicle insurance or workers' compensation insurance.

*Sales and purchases of marketable securities:* 40 cents in each \$100 or part thereof. Where the value is less than \$100 the rate is 10 cents in each \$25 or part thereof.

*Conveyances, grants and assignments of leases of land:* \$1 for each \$100 or part thereof of the value of the interest transferred where a lease is granted by a person other than the Commonwealth, in addition duty is payable at 30 cents for each \$100 or part thereof of the total rent payable for the specified period for which a lease is given.

A general exemption is provided from all duties for public hospitals, public benevolent institutions, religious institutions, public educational institutions, visiting diplomatic personnel and their families. The total amount collected as Australian Capital Territory Stamp Duty and Tax was \$1,969,000 in 1969-70, \$2,475,000 in 1970-71 and \$2,561,000 in 1971-72.

### Customs duties

A description of the Commonwealth Customs Tariff System is given in Chapter 11, Overseas Transactions. Details of duties collected on the import of commodities classified in accordance with the "Brussels Nomenclature" are given in the following table.



**CUSTOMS DUTIES ACCORDING TO BRUSSELS TARIFF DIVISIONS, 1966-67 TO 1970-71**  
(S'000)

<i>Brussels Tariff Division</i>	<i>Source of receipts</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
1	Live animals; animal products . . . . .	1,040	911	1,164	1,208	1,251
2	Vegetable products . . . . .	1,797	1,268	1,831	2,536	1,442
3	Animal and vegetable fats and oils and their cleavage products; prepared edible fats; animal and vegetable waxes . . . . .	2,440	1,578	1,191	2,541	1,984
4	Prepared foodstuffs; beverages, spirits and vinegar; tobacco . . . . .	47,149	51,278	53,742	60,572	64,220
5	Mineral products . . . . .	9,488	5,688	5,606	8,992	13,729
6	Products of the chemical industry and allied industries . . . . .	12,340	11,438	12,995	13,999	16,026
7	Artificial resins and plastic materials, cellulose esters and ethers, and articles thereof; rubber, synthetic rubbers, factice and articles thereof . . . . .	12,278	15,457	16,838	19,719	22,402
8	Raw hides and skins, leather, furskins and articles thereof; saddlery and harness; travel goods, handbags and similar containers; articles of gut (other than silk-worm gut) . . . . .	2,409	2,688	2,906	3,495	3,843
9	Wood and articles of wood; wood charcoal; cork and articles of cork; manufactures of straw, of esparto and of other plaiting materials; basketware and wickerwork . . . . .	6,902	8,111	7,941	8,741	9,184
10	Paper-making material; paper and paper-board and articles thereof . . . . .	7,545	8,437	9,778	10,977	11,346
11	Textiles and textile articles . . . . .	38,019	44,447	46,865	52,409	59,136
12	Footwear, headgear, umbrellas, sunshades, whips, riding-crops and parts thereof; prepared feathers and articles made therewith; artificial flowers; articles of human hair; fans . . . . .	4,362	5,760	6,658	9,727	10,440
13	Articles of stone, of plaster, of cement, of asbestos, of mica and of similar materials; ceramic products; glass and glassware . . . . .	7,346	8,343	9,418	11,379	11,190
14	Pearls, precious and semi-precious stones, precious metals, rolled precious metals, and articles thereof; imitation jewellery; coin . . . . .	1,200	1,375	1,344	1,849	1,999
15	Base metals and articles of base metal . . . . .	18,321	21,303	24,659	27,949	34,162
16	Machinery and mechanical appliances; electrical equipment; parts therefor . . . . .	44,813	55,172	65,506	85,255	98,306
17	Vehicles, aircraft, and parts thereof; vessels and certain associated transport equipment . . . . .	29,280	39,212	46,270	54,920	64,345
18	Optical, photographic, cinematographic measuring, checking, precision, medical and surgical instruments and apparatus; clocks and watches, musical instruments; sound recorders and reproducers; television image and sound recorders and reproducers, magnetic; parts therefor . . . . .	9,054	11,141	12,246	14,440	15,787
19	Arms and ammunition; parts therefor . . . . .	473	327	334	459	483
20	Miscellaneous manufactured articles . . . . .	8,422	8,684	9,438	11,123	11,659
21	Works of art, collectors' pieces and antiques . . . . .	5	3	13	10	12
	Miscellaneous . . . . .	4,613	3,970	4,195	5,132	6,772
	Primage . . . . .	5,799	5,668	5,341	6,142	6,285
	<i>Total customs duties and primage . . . . .</i>	<i>275,095</i>	<i>312,258</i>	<i>346,281</i>	<i>413,574</i>	<i>466,004</i>
	<i>Less Remission of duty under special circumstances. . . . .</i>	<i>222</i>	<i>38</i>	<i>17</i>	<i>14</i>	<i>15</i>
	<b>Total . . . . .</b>	<b>274,873</b>	<b>312,220</b>	<b>346,264</b>	<b>413,559</b>	<b>465,989</b>

**Excise duties**

Details of duties collected in relation to the production of specific commodities are given in the following table.

**COMMONWEALTH EXCISE REVENUE: CLASSIFICATION OF NET RECEIPTS**  
**1966-67 TO 1970-71**  
 (\$'000)

<i>Source of revenue</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
Beer . . . . .	320,832	338,614	355,001	369,937	382,469
Potable spirits . . . . .	24,872	26,783	24,440	26,525	25,923
Tobacco . . . . .	17,028	16,460	15,711	14,799	15,450
Cigars and cigarettes . . . . .	200,901	214,315	225,262	230,620	257,034
Cigarette papers . . . . .	824	836	833	814	859
Petrol . . . . .	220,617	234,142	253,007	266,627	327,821
Diesel fuel . . . . .	15,480	18,256	21,520	23,852	30,931
Matches . . . . .	2,167	2,227	2,384	2,346	2,289
Playing cards . . . . .	112	121	127	136	134
Grape wine . . . . .	..	..	..	..	8,702
Coal . . . . .	634	642	820	1,157	1,436
Canned fruit . . . . .	1,263	1,738	1,698	315	334
Miscellaneous . . . . .	1,692	1,121	1,625	2,168	235
<i>All items</i> . . . . .	<i>806,423</i>	<i>855,255</i>	<i>902,428</i>	<i>939,295</i>	<i>1,053,617</i>
Diesel fuel taxation . . . . .	362	304	274	351	425
Less rebates . . . . .	298	356	352	355	567
	64	-52	-78	-4	-142
Other rebates . . . . .	-39	-34	-43	-7	-15
<b>Total . . . . .</b>	<b>806,448</b>	<b>855,168</b>	<b>902,307</b>	<b>939,283</b>	<b>1,053,460</b>

The quantities of commodities on which excise duty were paid are given in Chapter 11, Overseas Transactions, page 316.

**Sales Tax**

The general rate of tax levied on all goods other than those specified in the schedules to the *Sales Tax (Exemptions and Classifications) Act 1935-1970* is 15 per cent and goods subject to special rates are taxed at either 2.5 per cent or 27.5 per cent. Prior to 19 August 1970 these special rates were 2.5 per cent and 25 per cent.

Particulars of the net amount of sales tax payable and the sales of taxable and exempt goods in each State for 1970-71 are given in the following table. The figures relate to sales during the period 1 July to 30 June. The figures for sales tax payable differ from those for net collections shown on page 556 because the latter include some adjustments in respect of earlier tax years and relate to tax payable on returns lodged during the year, which in general cover sales for the period June to May.

**COMMONWEALTH SALES TAX AND AMOUNT OF SALES: STATES AND TERRITORIES**  
**1970-71**  
 (\$'000)

	<i>N.S.W. (including A.C.T.)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Aust.</i>
Net sales on which sales tax was payable at—								
2.5 per cent . . . . .	344,466	291,624	96,173	65,424	60,287	15,886	929	874,789
15 per cent . . . . .	919,347	593,949	253,716	154,439	167,555	34,060	5,845	2,128,910
25 per cent . . . . .	77,219	50,191	19,013	15,781	14,470	3,693	255	180,621
27.5 per cent . . . . .	386,433	257,638	102,154	75,437	70,518	18,577	1,688	912,444
<i>Total net sales</i> . . . . .	<i>1,727,464</i>	<i>1,193,402</i>	<i>471,056</i>	<i>311,080</i>	<i>312,830</i>	<i>72,216</i>	<i>8,717</i>	<i>4,096,764</i>
Sales of exempt goods by registered persons . . . . .	4,219,093	2,655,750	1,415,928	768,205	791,705	247 315	43,471	10,141,468
<b>Total sales of taxable and exempt goods</b> . . . . .	<b>5,946,557</b>	<b>3,849,152</b>	<b>1,886,984</b>	<b>1,079,286</b>	<b>1,104,535</b>	<b>319,531</b>	<b>52,188</b>	<b>14,238,232</b>
<b>Sales tax payable</b> . . . . .	<b>272,087</b>	<b>179,781</b>	<b>73,307</b>	<b>49,492</b>	<b>49,650</b>	<b>11,538</b>	<b>1,428</b>	<b>637,284</b>

Sales of taxable and exempt goods and sales tax payable for Australia are shown in the following table for the years 1966-67 to 1970-71.

**COMMONWEALTH SALES TAX AND AMOUNT OF SALES  
AUSTRALIA, 1966-67 TO 1970-71**  
(\$ million)

<i>Year of sale</i>	<i>Net sales on which sales tax was payable</i>	<i>Sales of exempt goods by registered persons</i>	<i>Total sales of taxable and exempt goods</i>	<i>Sales tax payable</i>
1966-67 . . .	2,838	7,802	10,640	386
1967-68 . . .	3,095	8,394	11,489	424
1968-69 . . .	3,367	8,933	12,300	498
1969-70 . . .	3,810	9,759	13,569	577
1970-71 . . .	4,097	10,141	14,238	637

In the foregoing tables, sales include goods transferred to stock for sale by retail, goods imported by persons other than registered taxpayers, and goods used in the business of the taxpayer. Exempt sales relate to goods exempted from sales tax under the *Sales Tax (Exemptions and Classifications) Act 1935-1970*. The figures shown do not represent the total sales of all commodities, as vendors trading only in exempt goods are not required to be registered, and consequently the volume of their sales is not included in the statistics above. In addition, non-taxable sales (i.e. goods sold by one registered taxpayer to another registered taxpayer) are excluded.

#### Primary production taxes and charges

The following section shows current rates of charges, and receipts from, primary production and other charges during the years 1966-67 to 1970-71. Further information relating to primary production charges is given in Chapter 22, Rural Industry.

*Wheat export charge and wheat tax.* For details see Chapter 22, Rural Industry.

*Wool tax.* The present rate of wool tax is 1 per cent of the sale value of the wool and this rate has operated since 1 August 1970.

*Miscellaneous export charges.* These consist of charges levied on exports of apples and pears (*Apple and Pear Export Charges Act 1928-1968*), canned fruits (*Canned Fruits Export Charges Act 1926-1966*), dried fruits (*Dried Fruits Export Charges Act 1924-1970*), and eggs (*Eggs Export Charges Act 1947-1965*).

*Tobacco charge.* The rates of tobacco charge currently in force are as follows:

(a) in respect of leaf sold to a manufacturer:

(i) one half cent per pound of leaf, payable by the grower or other persons who own the leaf immediately before sale, and

(ii) one cent per pound of leaf, payable by the manufacturer;

(b) in respect of leaf grown and used by grower-manufacturers:

(i) where the manufacturer grows nine-tenths of the leaf used by him—one half cent per pound of leaf.

(ii) in other cases—one cent per pound of leaf.

(See also Chapter 22, Rural Industry.)

*Butter fat levy.* The *Butter Fat Levy Act 1965-66* provides for a maximum rate of \$0.60 per hundredweight of butterfat content of specified dairy produce and for the apportionment of the proceeds between overseas marketing (40 per cent), local promotion (40 per cent), and research (20 per cent). (See also Chapter 22, Rural Industry.)

*Canning-fruit charge.* The present rate of canning-fruit charge is \$1.00 per ton of fruit. This rate has operated since 10 December 1970.

*Honey levy.* The current rate of levy on honey sold for domestic consumption in Australia is 0.5 cents per pound.

*Livestock slaughter levy.* The present operative rate of levy for cattle is 46 cents per head of which 25 cents is for beef research, 1 cent for research into the meat processing industry and 20 cents to finance the operations of the Australian Meat Board. For sheep and lambs the levy is 3.85 cents per head and the components are 1.75 cents for sheep meat research, 0.1 cents for research into the meat processing industry and 2.00 cents for the Australian Meat Board.

*Poultry industry levy.* The rates of levy for each hen kept for commercial purposes (the first twenty hens being exempt) were 4.0 cents per fortnight from 1 July 1971 to 8 June 1972, nil per fortnight from 9 June 1972 to 30 June 1972 and 4.0 cents per fortnight from 1 July 1972.

*Meat chicken levy.* The rate of levy is 10 cents per hundred meat chickens hatched, payable by any hatchery with 20,000 chickens or more.

*Pig slaughter levy.* The present operative rate of levy is 5 cents for each pig slaughtered for human consumption.

*Wine grapes charges.* The *Wine Grapes Charges Act* 1929-1969 imposes a levy, which is payable by the owner of a winery or distillery, on all grapes delivered to that winery for use in the manufacture of wine. No charge is payable unless 10 tons or more of grapes have been used in the manufacture of wine during a season. The operative rate of charge as from 9 February 1972 is \$2.10 in respect of fresh grapes and \$6.30 in respect of dried grapes.

*Dried vine fruits levy.* The *Dried Vines Fruits Levy Act* 1971 imposes a levy on dried vine fruits where the average return for a season exceeds by more than \$10 the amount per ton that constitutes the base price for that season, with a maximum of \$20 per ton.

*Apple and pear stabilisation export duty.* The *Apple and Pear Stabilisation Export Duty Act* 1971 imposes an export duty on the exportation on consignment of fruit of a season where the average export return for a season exceeds the support price for that season. The maximum rate of export duty is 80 cents per reputed bushel.

*Dried fruits levy.* The *Dried Fruits Levy Act* 1971 imposes a levy on dried fruits of a season received for packing. The rate of levy is in the case of dried vine fruits 50 cents per ton and in the case of dried tree fruits \$2.50 per ton.

**COMMONWEALTH PRIMARY PRODUCTION TAXES AND CHARGES**  
**RECEIPTS, 1966-67 TO 1970-71**  
((\$'000))

Source of revenue	1966-67	1967-68	1968-69	1969-70	1970-71
Apple and pear export charge . . . . .	207	211	280	318	385
Butter fat levy . . . . .	2,120	1,936	1,956	2,189	2,184
Canned fruit export charge . . . . .	224	326	330	208	427
Canning fruit charge . . . . .	116	123	164	99	218
Dairy produce export charge . . . . .	..	..	..	..	..
Dairy produce levy . . . . .	..	..	..	..	..
Dried fruits export charge . . . . .	159	143	139	82	232
Dried vine fruits contributory charge—					
Currants . . . . .	52	..	25	44	..
Raisins . . . . .	..	42	..	..	..
Sultanas . . . . .	..	139	..	..	..
Egg export charge . . . . .	5	4	4	4	4
Honey levy . . . . .	92	96	106	103	108
Livestock slaughter levy—					
Cattle . . . . .	1,315	1,314	1,351	1,557	1,811
Sheep and lambs . . . . .	809	1,063	1,027	1,229	1,409
Chicken meat levy . . . . .	..	..	..	68	114
Poultry industry levy . . . . .	8,859	10,840	10,785	11,117	12,819
Tobacco charge . . . . .	239	427	313	539	502
Wheat tax . . . . .	1,081	633	1,276	788	607
Wine grapes charge . . . . .	380	357	379	449	534
Wool tax . . . . .	14,869	13,694	15,272	14,028	5,567
Other . . . . .	237	302	265	311	377
<b>Total . . . . .</b>	<b>30,760</b>	<b>31,649</b>	<b>33,674</b>	<b>33,133</b>	<b>27,300</b>



**Pay-roll tax**

Commonwealth pay-roll tax came into operation on 2 May 1941 and provided for the imposition of a tax on wages paid or payable in respect of any period of time occurring after 30 June 1941. The tax was payable by employers on all wages and salaries paid or payable in excess of a general exemption. The rate of tax, 2.5 per cent, was unchanged since its inception but the general exemption was increased over the years from \$173.33 to \$1,733.33 per month (\$2,080 per annum to \$20,800 per annum).

The laws relating to Commonwealth pay-roll tax are the *Pay-roll Tax Assessment Act* 1941–1969, the *Pay-roll Tax Act* 1941–1966, the *Pay-roll Tax (Termination of Commonwealth Tax) Act* 1971 and the *Pay-roll Tax Regulations*. Collections of pay-roll tax amounted to \$230,468,697 in 1969–70 and \$247,677,262 in 1970–71.

From 1 September 1971, in accordance with an agreement between the Commonwealth and the States following the June 1971 Premiers' Conference, the Commonwealth vacated the pay-roll tax field in favour of the States. The Commonwealth continued, however, to impose pay-roll tax in the two internal Commonwealth Territories, i.e. the Australian Capital Territory and the Northern Territory. The laws relating to pay-roll tax in the Territories are the *Pay-roll Tax (Territories) Assessment Act* 1971 and the *Pay-roll Tax (Territories) Act* 1971.

The rate of tax payable in the Territories is 2.5 per cent with a statutory exemption of wages up to \$1,733.33 per month (\$20,800 per annum) or a proportion of that amount in the case of an employer who is an employer also in a State.

On vacating the pay-roll tax field in favour of the States the Federal Government introduced an export incentive grant scheme to provide grants in respect of the 1971–72 and 1972–73 financial years equal to the rebates which would have been payable for those years if the pay-roll tax rebate scheme which had operated from the 1960–61 financial year had continued in operation until it was due to expire on 30 June 1973.

**Other Commonwealth taxation**

*Stevedoring Industry Charge.* The rates in operation since 10 February 1972 have been as follows:

Class of Waterside Worker			Rate
			\$
A	..	..	1.00 per man-hour
B	..	..	1.20 per man-hour
C	..	..	0.82 per man-hour

Class A waterside workers are regular waterside workers on weekly hire in permanent and non-permanent continuous ports. Class B are regular casual workers in non-permanent continuous ports and Class C are regular casual workers in non-continuous and seasonal ports and irregular workers in all ports.

*Broadcasting listeners and television viewers' licences.* Information relating to the various classes of licence, and the fees currently applicable to each, is given in Chapter 12, Transport, Communication and Travel, page 382.

**Taxes levied in the Territories**

*Northern Territory.* Taxes levied by the Commonwealth in the Northern Territory in the years 1966–67 to 1970–71 were as follows.

**NORTHERN TERRITORY: TAXATION BY TYPE OF TAX, 1966–67 TO 1970–71**  
(S'6000)

Type of tax	1966–67	1967–68	1968–69	1969–70	1970–71
Rates on land . . . . .	358	404	450	547	683
Vehicle registration fees . . . . .	273	321	517	586	647
Liquor taxes (a) . . . . .	62	72	89	120	366
Racing taxes . . . . .	23	29	33	48	96
Licences and registration fees n.e.i. . . . .	17	22	49	32	31
Stamp duties . . . . .	55	73	86	94	176
Other taxes, fees, fines, etc. . . . .	60	63	74	92	258
<b>Total taxation . . . . .</b>	<b>849</b>	<b>984</b>	<b>1,299</b>	<b>1,520</b>	<b>2,257</b>

(a) Estimated

*Australian Capital Territory.* Taxes levied by the Commonwealth in the Australian Capital Territory in the years 1966-67 to 1970-71 were as follows.

**AUSTRALIAN CAPITAL TERRITORY: TAXATION BY TYPE OF TAX, 1966-67 TO 1970-71**  
(£'000)

<i>Type of tax</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
Rates on land . . . . .	826	641	619	749	1,368
Vehicle registration fees . . . . .	610	694	747	830	937
Drivers', etc., licences . . . . .	59	65	142	81	101
Liquor taxes . . . . .	197	226	259	287	340
Licences and registration fees n.e.i. . . . .	86	89	115	137	150
Stamp duties . . . . .	..	..	..	1,969	2,475
Charges on conveyances of interests in land(a) . . . . .	305	298	383	..	..
Other taxes, fees, fines, etc. . . . .	38	32	25	25	21
<b>Total taxation . . . . .</b>	<b>2,122</b>	<b>2,045</b>	<b>2,290</b>	<b>4,079</b>	<b>5,393</b>

(a) These charges have been levied in the form of stamp duty from 1969-70 onwards.

Rates on land and stamp duties (*see also* page 568) are the principal taxes levied in the Australian Capital Territory.

#### Gross operating surplus of public enterprises

The *gross operating surplus* of public *trading* enterprises is the excess over working expenses of total revenue from charges before providing for capital consumption and other costs of capital (i.e. interest, debt redemption). *Financial* enterprises do not charge directly, at least not in full, for the services they render; their expenditure is largely financed by net receipts of interest and other transfer income. By convention, the output of these enterprises is valued at cost, so that no operating surplus is recorded in their production accounts. The profits of these enterprises are attributable to their property income. *Income* (including depreciation) of public financial enterprises is therefore arrived at after deducting interest paid and working expenses (i.e. net current expenditure on goods and services) from total receipts of interest and non-dwelling rent.

In the following table the revenue, working expenses and gross operating surplus of public trading enterprises are shown; public financial enterprises are reflected simply on the basis of their income (including depreciation). Further information relating to the more important of these enterprises may be found in the chapters dealing with banking, housing, railways, electric power generation, etc.

## REVENUE, WORKING EXPENSES AND GROSS OPERATING SURPLUS OF COMMONWEALTH PUBLIC ENTERPRISES

(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71p
REVENUE					
Development of resources and assistance to industry—					
Water supply, sewerage and irrigation . . . . .	1.0	1.8	1.6	2.1	
Other . . . . .	1.5	1.8	2.2	2.4	
Total development, etc. . . . .	2.6	3.6	3.8	4.5	
Manufacturing . . . . .	8.1	8.8	12.2	11.4	
Transport and communication—					
Post office . . . . .	431.5	502.7	567.2	625.2	
Railways . . . . .	20.9	23.4	26.4	29.8	
Other . . . . .	247.7	288.3	335.6	400.6	not available
Total transport, etc. . . . .	700.1	814.3	929.2	1,055.6	
Power, fuel and light . . . . .	31.1	32.5	36.5	40.2	
Housing . . . . .	25.7	25.2	25.5	33.3	
Insurance . . . . .	1.5	1.4	1.9	2.3	
Banks . . . . .	37.3	58.8	64.7	79.6	
Other . . . . .	4.3	4.7	11.3	12.8	
Total revenue . . . . .	810.6	949.4	1,085.2	1,239.8	

## WORKING EXPENSES(a)

Development of resources and assistance to industry—					
Water supply, sewerage and irrigation . . . . .	1.7	1.9	1.8	1.8	
Other . . . . .	1.7	1.8	1.8	2.1	
Total development, etc. . . . .	3.4	3.6	3.6	3.9	
Manufacturing . . . . .	8.7	8.7	9.8	9.7	
Transport and communication—					
Post office . . . . .	300.4	332.9	358.0	401.4	
Railways . . . . .	18.6	21.7	21.9	24.1	
Other . . . . .	204.4	230.1	260.9	311.4	not available
Total transport, etc. . . . .	523.4	584.6	640.7	736.9	
Power, fuel and light . . . . .	8.9	9.5	11.6	13.9	
Housing . . . . .	22.7	21.8	22.4	28.5	
Insurance . . . . .	1.1	1.4	1.4	1.6	
Other . . . . .	3.8	4.4	9.5	10.4	
Total working expenses . . . . .	572.1	634.0	699.1	804.9	

## GROSS OPERATING SURPLUS

Development of resources and assistance to industry—					
Water supply, sewerage and irrigation . . . . .	-0.7	..	-0.2	0.3	..
Other . . . . .	-0.1	..	0.4	0.3	1.4
Total development, etc. . . . .	-0.9	..	0.2	0.6	1.4
Manufacturing . . . . .	-0.5	0.1	2.5	1.7	0.7
Transport and communication—					
Post office . . . . .	131.1	169.8	209.2	223.9	252.6
Railways . . . . .	2.2	1.7	4.5	5.7	5.2
Other . . . . .	43.3	58.2	74.7	89.1	71.2
Total transport, etc. . . . .	176.6	229.7	288.5	318.8	329.0
Power, fuel and light . . . . .	22.2	22.9	24.9	26.3	37.2
Housing . . . . .	3.0	3.5	3.1	4.7	6.6
Insurance . . . . .	0.4	..	0.4	0.8	2.1
Banks . . . . .	37.3	58.8	64.7	79.6	96.5
Other . . . . .	0.4	0.4	1.8	2.4	1.5
Total gross operating surplus . . . . .	238.4	315.4	386.0	435.0	475.1

(a) Excludes depreciation and interest charges.

## STATE AUTHORITIES

The State authorities dealt with in this section include the central government of each State, statutory bodies created by or under State legislation to carry out activities on behalf of the central government, and incorporated organisations in which individual State governments have a controlling interest.

The transactions of many of the State authorities are itemised in State Consolidated Revenue Funds or in Trust Funds, so that a satisfactory coverage of their transactions can be obtained from a detailed analysis and reclassification of the published accounts whose receipts and payments are summarised in the statement of Treasury balances for each State. The remaining statutory bodies and other publicly owned or controlled organisations maintain accounts entirely, or largely separate from the public accounts—although there may be transactions between them and State governments (such as advances and capital contributions, interest and dividends, and votes for running expenses and capital works) which would affect the public accounts. The accounting reports of this group of organisations have to be collected and analysed in order to present a complete statement of the transactions of State authorities—or at least methods of analysis need to be adopted which adequately reflect their transactions so that they are, in principle, covered by the statistics. In the figures which follow in this section all expenditure by State central government authorities on certain institutions, whether direct (e.g. new building charged to Loan Fund) or indirect by way of current or capital grants to the bodies administering them, has been treated as final expenditure on, goods and services by State authorities: fees and gifts from persons or private businesses to these institutions are not included, and neither is the expenditure of the institutions from their own resources. Universities and hospitals are particular examples of organisations for which this practice has been adopted.

Many of these State authorities have been granted autonomy by State legislatures to the extent that they are largely financially independent. Some of these are funded from earmarked tax revenues and are vested with independent borrowing powers. A considerable number of others belong to the category of public enterprises, since they are able to charge for their services so as to cover their costs of operation. These bodies have usually been created to control a specific activity or provide a specific service within a State. It is often the case that in other States similar activities are carried out, or services are provided, by central government or local authorities. Details of the activities of autonomous or semi-autonomous State authorities engaged in construction and maintenance of roads and bridges, provision of water supply and sewerage services, and harbour facilities, are given in the last part of this chapter. Information on the activities of other State authorities engaged in such fields as transport, electricity and gas, housing and banking may be found in chapters relevant to those subjects.

Details of the transactions of State authorities are given in the tables which follow. These figures have been prepared on a national accounting basis, and arranged in a form of presentation which is compatible with the figures given earlier for Commonwealth authorities. The figures are generally consistent with those given for State and local authorities in *Australian National Accounts, 1970–71*. Reference should be made to the introduction of *Public Authority Finance, 1969–70* for definitions and descriptions of items appearing in these tables, and also for further details of the organisations covered by the figures. However because of the preliminary nature of the 1970–71 information at the time of compilation of the statistics State dissections have been shown only for 1969–70.

Additional information relating to the activities of the State authorities may also be found in the Year Books of the individual States.



**Receipts and outlay**

The receipts and outlay of State authorities for the five year period ended 1970-71 are given in the following table.

**STATE AUTHORITIES: RECEIPTS AND OUTLAY, 1966-67 TO 1970-71**

(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71 <sub>p</sub>
<b>RECEIPTS</b>					
Current receipts—					
Taxes, fees, fines, etc. . . . .	664.0	753.0	859.6	955.6	1,002.3
Public enterprises—gross operating surplus . . . . .	452.5	496.9	542.8	602.4	572.6
Interest, rent, royalties and dividends . . . . .	100.1	103.1	115.5	139.4	170.5
Grants from Commonwealth . . . . .	964.6	1,056.8	1,155.0	1,309.0	1,652.0
<i>Total current receipts . . . . .</i>	<i>2,181.3</i>	<i>2,409.8</i>	<i>2,672.9</i>	<i>3,006.4</i>	<i>3,397.4</i>
Capital receipts—					
Net borrowing—					
Government securities—					
Australia . . . . .	530.9	536.3	540.5	579.2	393.8
Overseas . . . . .	—92.1	—76.3	—24.1	—88.6	—51.7
Public corporation securities . . . . .	185.3	199.0	248.0	232.7	262.3
Advances from Commonwealth . . . . .	136.3	169.8	110.0	174.5	150.1
Net receipts of private trust funds . . . . .	16.9	12.2	17.1	24.7	30.0
Grants from Commonwealth . . . . .	218.4	254.9	263.9	311.5	554.6
Other funds available (including errors and omissions) . . . . .	70.6	75.4	80.9	99.1	136.8
<i>Total capital receipts . . . . .</i>	<i>1,066.2</i>	<i>1,171.3</i>	<i>1,236.3</i>	<i>1,333.2</i>	<i>1,475.8</i>
Reduction in—					
Cash and bank balances . . . . .	—44.7	—88.6	—58.2	—22.9	—99.3
Security holdings . . . . .	—28.5	—29.2	—69.7	—86.1	—55.5
<i>Total receipts . . . . .</i>	<i>3,174.2</i>	<i>3,463.4</i>	<i>3,781.3</i>	<i>4,230.6</i>	<i>4,718.4</i>
<b>OUTLAY</b>					
Current outlay—					
Net current expenditure on goods and services . . . . .	1,189.1	1,323.6	1,484.5	1,718.1	2,052.7
Interest . . . . .	490.3	531.8	577.1	633.2	684.2
Cash benefits to persons . . . . .	24.7	29.4	37.1	41.9	47.1
Subsidies . . . . .	13.3	14.9	15.5	20.9	17.5
Grants for private capital purposes . . . . .	11.6	18.6	14.7	18.4	17.5
Grants to local authorities . . . . .	2.1	2.7	3.1	—0.7	5.7
<i>Total current outlay . . . . .</i>	<i>1,731.1</i>	<i>1,921.0</i>	<i>2,132.0</i>	<i>2,431.9</i>	<i>2,824.7</i>
Capital outlay—					
Gross capital formation—					
Expenditure on new fixed assets . . . . .	1,271.1	1,358.4	1,499.6	1,604.1	1,701.7
Expenditure on existing assets and increase in stocks . . . . .	12.0	—9.5	—6.2	24.6	16.8
<i>Total . . . . .</i>	<i>1,283.1</i>	<i>1,348.9</i>	<i>1,493.4</i>	<i>1,628.6</i>	<i>1,718.5</i>
Grants to local authorities . . . . .	63.6	68.6	72.2	71.7	74.7
Advances to local authorities . . . . .	3.6	5.1	5.2	7.4	4.3
Advances to other sectors . . . . .	92.9	119.8	78.5	91.1	96.3
<i>Total capital outlay . . . . .</i>	<i>1,443.1</i>	<i>1,542.4</i>	<i>1,649.3</i>	<i>1,798.7</i>	<i>1,893.7</i>
<i>Total outlay . . . . .</i>	<i>3,174.2</i>	<i>3,463.4</i>	<i>3,781.3</i>	<i>4,230.6</i>	<i>4,718.4</i>

The following table provides details of the receipts and outlay of State authorities in each of the six States for the year 1969-70.

**STATE AUTHORITIES: RECEIPTS AND OUTLAY, BY STATE, 1969-70**  
(\$ million)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
<b>RECEIPTS</b>							
Current receipts—							
Taxes, fees, fines, etc. . . . .	387.2	289.0	117.3	67.2	73.5	21.4	955.6
Public enterprises—gross operating surplus . . . . .	225.4	171.6	74.0	62.8	41.3	27.3	602.4
Interest, rent, royalties and dividends . . . . .	50.2	24.6	19.4	14.5	25.4	5.4	139.4
Grants from Commonwealth . . . . .	420.5	318.5	204.1	140.0	150.6	75.2	1,309.0
<i>Total current receipts . . . . .</i>	<i>1,083.3</i>	<i>803.7</i>	<i>414.8</i>	<i>284.5</i>	<i>290.7</i>	<i>129.3</i>	<i>3,006.4</i>
Capital receipts—							
Net borrowing—							
Government securities—							
Australia . . . . .	160.1	142.3	97.0	81.0	59.3	39.4	579.2
Overseas . . . . .	—11.3	—18.0	—25.7	—15.4	—15.9	—2.2	—88.6
Public corporation securities . . . . .	61.8	97.5	34.4	18.4	12.1	8.4	232.7
Advances from Commonwealth . . . . .	54.2	48.5	18.1	25.3	16.0	12.4	174.5
Net receipts of private trust funds . . . . .	2.2	1.6	18.4	0.3	0.5	1.7	24.7
Grants from Commonwealth . . . . .	90.6	61.6	55.5	40.5	51.2	12.0	311.5
Other funds available (including errors and omissions) . . . . .	50.3	15.1	2.4	—0.4	24.9	6.9	99.1
<i>Total capital receipts . . . . .</i>	<i>407.9</i>	<i>348.6</i>	<i>200.1</i>	<i>149.8</i>	<i>148.2</i>	<i>78.6</i>	<i>1,333.2</i>
Reduction in—							
Cash and bank balances . . . . .	—21.3	13.3	—0.4	—3.6	—5.5	—5.4	—22.9
Security holdings . . . . .	—58.9	—7.1	—3.3	—7.3	—5.8	—3.6	—86.1
<i>Total receipts . . . . .</i>	<i>1,411.0</i>	<i>1,158.5</i>	<i>611.3</i>	<i>423.3</i>	<i>427.6</i>	<i>198.9</i>	<i>4,230.6</i>
<b>OUTLAY</b>							
Current outlay—							
Net current expenditure on goods and services . . . . .	630.8	458.7	238.4	149.8	168.2	72.2	1,718.1
Interest . . . . .	184.2	192.4	83.8	78.5	56.1	38.3	633.2
Cash benefits to persons . . . . .	21.8	5.2	6.2	3.9	3.9	0.9	41.9
Subsidies . . . . .	7.3	1.7	10.1	0.3	1.4	0.1	20.9
Grants for private capital purposes . . . . .	3.1	4.2	2.0	2.2	4.1	2.8	18.4
Grants to local authorities . . . . .	2.7	0.1	—0.7	—0.6	—0.3	—1.9	—0.7
<i>Total current outlay . . . . .</i>	<i>849.9</i>	<i>662.3</i>	<i>339.8</i>	<i>234.2</i>	<i>233.3</i>	<i>112.4</i>	<i>2,431.9</i>
Capital outlay—							
Gross capital formation—							
Expenditure on new fixed assets . . . . .	498.8	468.4	224.4	164.2	168.5	79.7	1,604.1
Expenditure on existing assets and increase in stocks . . . . .	5.9	4.3	2.0	4.1	8.1	0.2	24.6
<i>Total . . . . .</i>	<i>504.7</i>	<i>472.7</i>	<i>226.4</i>	<i>168.3</i>	<i>176.6</i>	<i>79.9</i>	<i>1,628.6</i>
Grants to local authorities . . . . .	32.0	2.7	22.3	5.3	7.8	1.5	71.7
Advances to local authorities . . . . .	0.3	0.2	6.1	—0.5	..	1.3	7.4
Advances to other sectors . . . . .	24.1	20.5	16.8	16.1	9.9	3.8	91.1
<i>Total capital outlay . . . . .</i>	<i>561.1</i>	<i>496.2</i>	<i>271.5</i>	<i>189.1</i>	<i>194.3</i>	<i>86.5</i>	<i>1,798.7</i>
<i>Total outlay . . . . .</i>	<i>1,411.0</i>	<i>1,158.5</i>	<i>611.3</i>	<i>423.3</i>	<i>427.6</i>	<i>198.9</i>	<i>4,230.6</i>

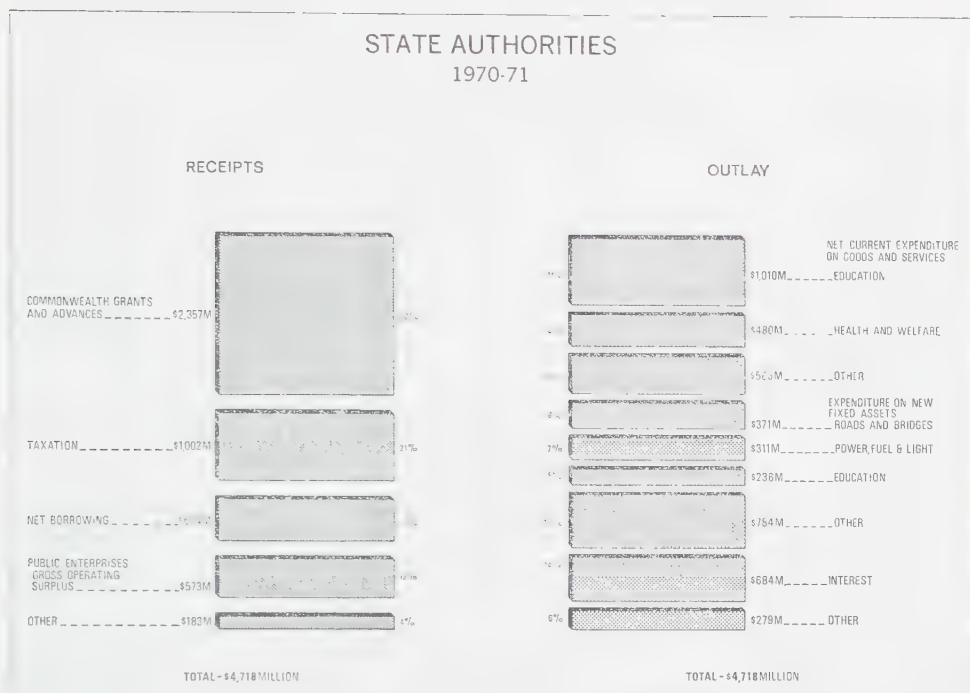


PLATE 34

**Main components of outlay**

The main component of the outlay of State authorities is expenditure on goods and services. As in the case of Commonwealth authorities, this expenditure (as shown here) consists conceptually of purchases of goods and services for current consumption, less any charges made by the authorities, together with expenditure on acquisition of fixed assets and changes in stocks, and may be regarded as a measure of demand for goods and services. The following tables show functional dissections of net current expenditure on goods and services and expenditure on new fixed assets as an indication of the range of programmes in which the State authorities are involved.

**STATE AUTHORITIES: NET CURRENT EXPENDITURE ON GOODS AND SERVICES,  
CLASSIFIED BY FUNCTION, 1966-67 TO 1970-71**  
(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71 <sup>p</sup>
Law, order and public safety . . . . .	148.0	161.5	179.2	202.6	231.1
Education . . . . .	555.0	624.8	706.3	837.8	1,009.6
Cultural and recreational facilities . . . . .	15.5	17.0	19.3	20.5	21.4
Health . . . . .	237.7	265.8	301.0	347.6	424.8
Welfare . . . . .	35.0	38.2	40.1	44.5	55.5
Development of resources and assistance to industry . . . . .	84.2	92.2	100.4	112.0	127.5
Transport and communication . . . . .	10.5	10.9	12.9	12.7	14.5
Legislature . . . . .	10.7	11.1	11.8	13.6	15.4
General administration . . . . .	45.2	49.8	54.8	60.4	68.9
Regulation of trade and industry . . . . .	10.1	10.5	11.4	12.8	14.5
Other . . . . .	2.5	3.3	4.7	5.2	13.2
Not allocated to function . . . . .	34.8	38.4	42.7	48.6	56.3
<b>Total . . . . .</b>	<b>1,189.1</b>	<b>1,323.6</b>	<b>1,484.5</b>	<b>1,718.1</b>	<b>2,052.7</b>

**STATE AUTHORITIES: NET CURRENT EXPENDITURE ON GOODS AND SERVICES  
CLASSIFIED BY FUNCTION, BY STATE, 1969-70**  
(\$ million)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
Law, order and public safety . . . . .	81.2	48.7	31.2	15.6	18.7	7.2	202.6
Education . . . . .	299.3	257.1	98.9	81.6	70.7	30.3	837.8
Cultural and recreational facilities . . . . .	7.1	5.2	1.9	2.8	1.9	1.7	20.5
Health . . . . .	129.9	87.4	52.7	27.1	36.8	13.6	347.6
Welfare . . . . .	10.4	13.0	7.8	4.4	6.8	2.1	44.5
Development of resources and assistance to industry . . . . .	38.0	19.8	21.7	7.6	17.5	7.6	112.0
Transport and communication . . . . .	11.9	0.4	-0.4	..	0.4	0.4	12.7
Legislature . . . . .	4.3	3.2	1.7	1.6	1.7	1.0	13.6
General administration . . . . .	20.7	8.5	10.6	7.8	6.3	6.5	60.4
Regulation of trade and industry . . . . .	2.3	4.8	3.3	1.1	0.9	0.5	12.8
Other . . . . .	1.5	-0.4	3.8	0.4	-0.6	0.4	5.2
Not allocated to function . . . . .	24.3	11.1	5.2	..	7.2	1.0	48.6
<b>Total . . . . .</b>	<b>630.8</b>	<b>458.7</b>	<b>238.4</b>	<b>149.8</b>	<b>168.2</b>	<b>72.2</b>	<b>1,718.1</b>

**STATE AUTHORITIES: EXPENDITURE ON NEW FIXED ASSETS  
CLASSIFIED BY FUNCTION, 1966-67 TO 1970-71**  
(\$ million)

	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71p</i>
Law, order and public safety . . . . .	14.6	15.7	21.5	21.6	23.0
Education . . . . .	160.0	165.2	191.1	208.9	235.9
Cultural and recreational facilities . . . . .	8.2	8.5	7.8	11.5	13.2
Health . . . . .	65.1	64.6	74.0	80.8	81.5
Welfare . . . . .	2.8	4.5	4.7	4.8	5.4
Water supply, sewerage, irrigation . . . . .	136.2	147.8	157.2	194.3	227.3
Other development of resources and assistance to industry . . . . .	86.7	98.1	104.5	108.8	103.7
Manufacturing . . . . .	4.4	3.6	2.1	3.3	6.0
Railways . . . . .	108.3	107.8	114.2	120.2	122.8
Harbours . . . . .	43.4	42.1	56.9	48.2	43.8
Roads and bridges . . . . .	256.4	277.8	305.7	340.9	370.9
Other transport and communication . . . . .	3.9	16.1	40.4	13.9	19.6
Power, fuel and light . . . . .	296.4	308.1	326.0	338.1	311.1
Housing . . . . .	57.0	61.2	57.3	68.8	84.4
Other . . . . .	27.6	37.3	36.2	39.9	53.4
<b>Total . . . . .</b>	<b>1,271.1</b>	<b>1,358.4</b>	<b>1,499.6</b>	<b>1,604.1</b>	<b>1,701.7</b>
<i>of which—</i>					
General government . . . . .	580.0	616.8	678.8	748.5	840.0
Public enterprises . . . . .	691.1	741.6	820.8	855.5	861.8

**STATE AUTHORITIES: EXPENDITURE ON NEW FIXED ASSETS, CLASSIFIED BY  
FUNCTION, BY STATE, 1969-70**  
(\$ million)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
Law, order and public safety . . . . .	9.2	4.2	4.6	1.1	1.3	1.2	21.6
Education . . . . .	74.8	60.3	25.6	20.9	20.0	7.4	208.9
Cultural and recreational facilities . . . . .	6.6	3.0	0.3	..	0.7	0.9	11.5
Health . . . . .	24.8	18.8	9.4	11.6	11.4	4.8	80.8
Welfare . . . . .	2.4	1.6	0.5	0.3	..	0.1	4.8
Water supply, sewerage, irrigation . . . . .	76.3	65.2	2.8	28.2	21.0	0.7	194.3
Other development of resources and assistance to industry . . . . .	40.6	30.2	20.0	1.8	13.0	3.2	108.8
Manufacturing . . . . .	1.4	0.2	..	0.2	1.4	..	3.3
Railways . . . . .	34.3	17.9	26.7	19.1	21.2	1.0	120.2
Harbours . . . . .	16.4	11.9	9.4	4.2	2.3	4.0	48.2
Roads and bridges . . . . .	81.2	111.9	65.2	35.7	35.1	11.8	340.9
Other transport and communication . . . . .	3.9	1.4	..	7.2	1.3	0.1	13.9
Power, fuel and light . . . . .	94.0	117.4	41.3	22.3	20.4	42.6	338.1
Housing . . . . .	22.5	15.2	10.9	4.1	15.3	0.7	68.8
Other . . . . .	10.4	9.2	7.6	7.5	4.1	1.1	39.9
<b>Total . . . . .</b>	<b>498.8</b>	<b>468.4</b>	<b>224.4</b>	<b>164.2</b>	<b>168.5</b>	<b>79.7</b>	<b>1,604.1</b>



**Main components of receipts**

The major source of funds available to State authorities is in the form of financial assistance by way of grants and advances from the Commonwealth. Taxation is also an important source of revenue, and central government borrowing by way of Commonwealth securities issued on behalf of the States as well as borrowing by statutory bodies accounted for a significant proportion of the total funds available, in marked contrast to the relatively minor role played by borrowing in financing the activities of Commonwealth authorities.

Details of Commonwealth financial assistance to the States have already been given in the section dealing with Commonwealth authorities, and government borrowing activities are dealt with later in this chapter.

The following tables provide details of the taxes collected by State authorities classified by type of tax. Further information relating to State taxes may be found in *Public Authority Finance: Taxation*, 1970-71.

**STATE AUTHORITIES: TAXATION, BY TYPE OF TAX, 1966-67 TO 1970-71**  
(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71 <sup>p</sup>
Estate, gift, probate and succession duties . . . . .	106.6	119.2	134.4	137.3	149.4
Property taxes—					
Land tax . . . . .	72.7	76.1	75.1	77.0	91.5
Metropolitan improvement rates . . . . .	5.3	6.6	7.3	8.4	8.9
<i>Total property</i> . . . . .	78.0	82.7	82.5	85.3	100.5
Liquor taxes . . . . .	31.2	34.3	38.4	41.0	44.5
Taxes on gambling—					
Lotteries . . . . .	28.2	29.8	30.7	32.4	33.3
Poker machines . . . . .	19.7	23.1	26.3	30.4	34.7
Racing . . . . .	38.0	44.3	49.9	56.8	62.8
<i>Total gambling</i> . . . . .	85.8	97.1	106.8	119.7	130.8
Taxes on ownership and operation of motor vehicles—					
Vehicle registration fees and taxes . . . . .	115.3	124.4	136.8	145.6	154.7
Drivers', etc., licences and fees . . . . .	14.4	14.9	16.1	16.7	19.4
Stamp duty on vehicle registration . . . . .	11.6	14.8	16.7	19.2	20.3
Road transport taxes . . . . .	12.1	13.7	14.5	15.8	16.4
Road maintenance contributions . . . . .	26.3	28.9	32.7	35.6	37.4
Motor car third party insurance surcharge and duties . . . . .	3.3	3.5	4.1	4.8	5.1
<i>Total motor vehicles</i> . . . . .	182.9	200.1	220.8	237.9	253.3
Fire brigades contributions from insurance companies . . . . .	17.7	19.3	22.2	25.2	28.1
Stamp duties, n.e.i. . . . .	125.0	157.9	206.6	256.9	239.9
Licences and registration fees, n.e.i. . . . .	4.5	4.8	5.4	6.0	6.5
Other taxes, fees, fines, etc. . . . .	32.3	37.5	42.5	46.3	49.2
<i>Total taxation</i> . . . . .	664.0	753.0	859.6	955.6	1,002.3

STATE AUTHORITIES: PROPORTION OF EACH TYPE OF TAX TO TOTAL TAXATION  
1966-67 TO 1970-71  
(per cent)

	1966-67	1967-68	1968-69	1969-70	1970-71p
Estate, gift, probate and succession duties . .	16.1	15.8	15.6	14.4	14.9
Property taxes . . . . .	11.7	11.0	9.6	8.9	10.0
Liquor taxes . . . . .	4.8	4.6	4.7	4.3	4.4
Taxes on gambling . . . . .	12.9	12.9	12.4	12.5	13.1
Taxes on ownership and operation of motor vehicles . . . . .	27.5	26.6	25.7	24.9	25.3
Fire brigades contribution from insurance companies . . . . .	2.7	2.6	2.6	2.6	2.8
Stamp duties n.e.i. . . . .	18.8	21.0	24.0	26.9	23.9
Licences and registration fees n.e.i. . . . .	0.7	0.6	0.6	0.6	0.6
Other taxes, fees, fines, etc. . . . .	4.9	5.0	4.9	4.8	4.9
<b>Total taxation . . . . .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

STATE AUTHORITIES: TAXATION BY TYPE OF TAX, BY STATE  
1969-70  
(\$ million)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
Estate, gift, probate and succession duties	55.4	44.4	15.9	8.9	9.4	3.3	137.3
Property taxes—							
Land tax . . . . .	32.5	22.4	5.0	7.6	6.7	2.6	77.0
Metropolitan improvement rates . . . . .	..	7.0	..	..	1.3	..	8.4
<b>Total property . . . . .</b>	<b>32.5</b>	<b>29.4</b>	<b>5.0</b>	<b>7.6</b>	<b>8.1</b>	<b>2.6</b>	<b>85.3</b>
Liquor taxes . . . . .	16.4	11.4	5.7	3.1	3.3	1.1	41.0
Taxes on gambling—							
Lotteries . . . . .	18.0	6.5	4.3	1.8	1.7	..	32.4
Poker machines . . . . .	30.4	..	..	..	..	..	30.4
Racing . . . . .	21.5	19.4	7.4	2.6	4.6	1.4	56.8
<b>Total gambling . . . . .</b>	<b>69.9</b>	<b>25.9</b>	<b>11.7</b>	<b>4.4</b>	<b>6.3</b>	<b>1.4</b>	<b>119.7</b>
Taxes on ownership and operation of motor vehicles—							
Vehicle registration fees and taxes . . . . .	46.9	48.8	23.4	13.4	8.0	5.1	145.6
Drivers', etc., licences and fees . . . . .	8.6	3.4	1.5	1.1	1.6	0.5	16.7
Stamp duty on vehicle registration . . . . .	4.7	6.7	3.1	2.4	2.0	0.4	19.2
Road transport taxes . . . . .	5.6	1.9	7.0	..	0.9	0.4	15.8
Road maintenance contributions . . . . .	15.9	8.6	4.8	2.8	3.6	..	35.6
Motor car third party insurance surcharge and duties . . . . .	..	2.7	..	0.9	0.8	0.3	4.8
<b>Total motor vehicles . . . . .</b>	<b>81.6</b>	<b>72.1</b>	<b>39.7</b>	<b>20.7</b>	<b>16.9</b>	<b>6.8</b>	<b>237.9</b>
Fire brigades contribution from insurance companies . . . . .	9.6	7.3	4.9	1.1	1.8	0.7	25.2
Stamp duties n.e.i. . . . .	105.0	80.4	23.9	18.5	23.9	5.2	256.9
Licences and registration fees n.e.i. . . . .	1.9	2.0	0.6	0.7	0.7	0.1	6.0
Other taxes, fees, fines, etc. . . . .	14.7	16.0	9.9	2.3	3.1	0.3	46.3
<b>Total taxation . . . . .</b>	<b>387.2</b>	<b>289.0</b>	<b>117.3</b>	<b>67.2</b>	<b>73.5</b>	<b>21.4</b>	<b>955.6</b>

## LOCAL AUTHORITIES

In each State of the Commonwealth there exists a system of local government whose powers and responsibilities are in general similar, and cover such matters as the construction and maintenance of roads, streets and bridges, water, sewerage and drainage systems, and health and sanitary services, the supervision of building, and the administration of regulations relating to items such as weights and measures, slaughtering, the registration of dogs, etc. In addition to these obligatory functions, there are also many which may be performed by a local authority either with or without the consent of the ratepayers or the Governor-in-Council. These include transport facilities, electricity, gas, and other business undertakings, hospitals, charitable institutions, recreation grounds, parks, baths, libraries, museums, etc.

The system is based on the principle of a grant of specific powers by the State legislatures to the local authorities, their autonomy, however, being more or less limited by the provision for general supervision by a department of the central government or by the Governor-in-Council. Otherwise, within the scope of the Acts under which they are constituted or which they have to administer, they are responsible only to the ratepayers. While the broad pattern of local government throughout the States of Australia is similar, the range of activities, election of officers, methods of valuation and rating powers, etc. vary considerably from State to State, and even within States.

The areas over which local government bodies, numbering in excess of 900, exercise general control, are known in New South Wales as cities, municipalities and shires; in Victoria as cities, towns, boroughs and shires; in Queensland as cities, towns and shires; in South Australia as cities, corporate towns and district council areas; in Western Australia as cities, towns and shires; and in Tasmania as cities and municipalities. In New South Wales some local authorities in an area have combined to provide services such as electricity, water, sewerage and drainage—e.g. the county councils. Within shires there are also some municipal units known as urban areas. Apart from the more thinly populated parts of New South Wales and South Australia, and the Commonwealth Territories (except for the City of Darwin and Alice Springs), practically the whole of Australia comes within local government jurisdiction. For further details *see* State Year Books.

### Area, population, dwellings, and value of rateable property

The area, population, dwellings, and the value of rateable property in the incorporated areas of each State are shown in the following table. The valuations relate to rateable property only and exclude government and other non-rateable property, whose value in the aggregate is considerable. In some cases councils rate on annual value, or unimproved capital value, or improved capital value, or partly on each of these bases of valuation. The amounts stated are the totals for the areas rated according to each basis of valuation. Particulars of dwellings are in accordance with the definition used in the 1966 census, and are compiled from information collected on the census schedules. For the purpose of the census a dwelling was defined as any habitation occupied by a household group living together as a domestic unit, whether comprising the whole or only part of a building. The term has, therefore, a very wide reference and includes, in addition to houses and flats, a great variety of dwellings ranging from a single-roomed shack to a multi-roomed hotel or institution. Unoccupied dwellings include vacant dwellings available for sale and renting, 'week-end' and holiday dwellings, and other dwellings temporarily unoccupied on the night of the Census. Dwellings being built are not included.

In the following table particulars of number, area, and value of rateable property refer to estimates made, where practicable, for the capital city statistical division and outside this division. Wherever the statistical boundary cuts across a local government area the estimates have involved either the inclusion or exclusion of the whole of the local government authority concerned in, or from, the capital city statistical division. Particulars of population refer to estimates made for capital city statistical division and outside this division in accordance with the definition of boundaries used in the 1966 census and exclude migratory population and population in unincorporated areas.

**LOCAL GOVERNMENT AUTHORITIES: AREA, POPULATION, DWELLINGS, AND  
VALUE OF RATEABLE PROPERTY, STATES**

Location	Number	Area '000 acres	Popula- tion '000	Dwellings		Value of rateable property		
				Occupied	Unoccu- pied	Unim- proved capital value	Improved capital value	Annual value
<b>New South Wales(a)—</b>								
Sydney Statistical Division	40	974	(b)2,781	(c)730,877	(c)39,701	5,187,500	11,613,100	837,100
Other . . . . .	185	173,395	(b)1,801	(c)458,665	(c)61,485	2,136,200	n.a.	n.a.
<b>Total New South Wales</b>	<b>225</b>	<b>174,369</b>	<b>(b)4,582</b>	<b>(c)1,189,542</b>	<b>(c)101,186</b>	<b>7,323,700</b>	<b>n.a.</b>	<b>n.a.</b>
<b>Victoria(d)—</b>								
Melbourne Statistical Di- vision . . . . .	55	1,933	2,438	765,125		n.a.	10,544,764	576,445
Other(e) . . . . .	155	54,177	997	307,381		n.a.	4,941,582	252,739
<b>Total Victoria</b>	<b>210</b>	<b>56,110</b>	<b>3,437</b>	<b>1,072,506</b>		<b>n.a.</b>	<b>15,486,346</b>	<b>829,184</b>
<b>Queensland(f)—</b>								
Brisbane Statistical Di- vision . . . . .	9	2,428	886	261,536		947,483	n.a.	n.a.
Other . . . . .	122	423,830	906	269,558		804,396	n.a.	n.a.
<b>Total Queensland</b>	<b>131</b>	<b>426,258</b>	<b>1,793</b>	<b>531,094</b>		<b>1,751,875</b>	<b>n.a.</b>	<b>n.a.</b>
<b>South Australia(g)—</b>								
Adelaide Statistical Di- vision . . . . .	31	573	811	237,006	(c)12,194	n.a.	2,520,000	126,005
Other . . . . .	107	36,679	316	87,553	(c)12,397	n.a.	1,262,000	63,112
<b>Total South Australia</b>	<b>138</b>	<b>37,252</b>	<b>1,127</b>	<b>324,559</b>	<b>(c)24,591</b>	<b>n.a.</b>	<b>3,782,000</b>	<b>189,118</b>
<b>Western Australia(f)—</b>								
Perth Statistical Division .	26	1,327	663	205,950		594,246	n.a.	40,190
Other . . . . .	114	623,262	317	95,115		300,110	n.a.	7,983
<b>Total Western Australia</b>	<b>140</b>	<b>624,589</b>	<b>980</b>	<b>301,065</b>		<b>894,356</b>	<b>n.a.</b>	<b>48,173</b>
<b>Tasmania(b)—</b>								
Hobart Statistical Division	5	238	153	43,233	3,644	209,910	717,888	44,962
Other . . . . .	44	16,647	237	67,328	9,822	232,541	980,885	56,007
<b>Total Tasmania</b>	<b>49</b>	<b>16,885</b>	<b>390</b>	<b>110,561</b>	<b>13,466</b>	<b>442,451</b>	<b>1,698,773</b>	<b>100,969</b>

(a) Based on year ended 31 December 1969. (b) Year ended 30 June 1971. (c) Estimated on basis of Census 30 June 1966. (d) Based on year ended 30 September 1970. (e) Excludes Yallourn Works Area, under the jurisdiction of the State Electricity Commission, and other unincorporated areas. (f) Year ended 30 June 1970. Total population less migratory and unincorporated. (g) Year ended 30 June 1969.

### Receipts and outlay

The following tables show details of the receipts and outlay of all local authorities for the years 1966-67 to 1970-71, and of local authorities in each of the six States in 1969-70. The figures up to 1967-68 are based upon detailed analyses of the accounting reports of local authorities; however, as complete information was not available at the time of their preparation, the figures for 1969-70 have been estimated, and should therefore be regarded as approximate only. Figures shown for 1970-71 are based on very limited data, but may be taken as rough indicators of orders of magnitude.



**LOCAL AUTHORITIES: RECEIPTS AND OUTLAY, 1966-67 TO 1970-71**  
(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71 <sub>p</sub>
<b>RECEIPTS</b>					
Current receipts—					
Taxes, fees, fines, etc.—					
Rates on land . . . . .	292.5	319.4	345.5	372.8	402.2
Licences, etc. . . . .	10.7	11.7	13.0	13.9	14.3
<i>Total</i> . . . . .	303.2	331.1	358.4	386.7	416.5
Public enterprises—gross operating surplus . . . . .	78.6	86.9	96.2	103.1	113.2
Interest, rent, royalties and dividends . . . . .	2.9	3.1	3.3	2.4	2.6
Grants from State . . . . .	2.1	2.7	3.1	-0.7	5.7
<i>Total current receipts</i> . . . . .	386.9	423.7	461.0	491.5	537.9
Capital receipts—					
Net borrowing—					
Local authority securities . . . . .	80.3	102.4	107.4	99.1	112.8
Advances from State . . . . .	3.6	5.1	5.2	7.4	4.3
Grants from State . . . . .	63.6	68.6	72.2	71.7	74.7
Other funds available (including errors and omissions) . . . . .	41.1	41.1	43.1	50.1	51.4
<i>Total capital receipts</i> . . . . .	188.5	217.3	227.9	228.3	243.2
Reduction in—					
Cash and bank balances . . . . .	4.3	-8.6	-12.1	-6.0	10.5
Security holdings . . . . .	2.7	-7.2	-1.0	2.8	..
<i>Total receipts</i> . . . . .	582.4	625.3	675.8	716.5	791.6
<b>OUTLAY</b>					
Current outlay—					
Net current expenditure on goods and services—					
Cultural and recreational facilities . . . . .	37.8	41.3	42.2	45.1	50.6
Health . . . . .	22.1	26.0	29.2	31.2	35.0
Development of resources and assistance to industry . . . . .	4.3	4.2	4.6	4.0	5.2
General administration . . . . .	45.2	49.7	57.2	62.5	68.1
Other . . . . .	30.2	32.4	29.4	33.9	39.9
<i>Total</i> . . . . .	139.6	153.6	162.6	176.7	198.9
Interest . . . . .	59.6	65.8	72.9	79.3	85.7
<i>Total current outlay</i> . . . . .	199.2	219.5	235.5	256.0	284.6
Capital outlay—					
Expenditure on new fixed assets—					
Cultural and recreational facilities . . . . .	13.8	13.2	16.8	17.7	19.8
Water supply, sewerage . . . . .	49.1	55.2	60.2	64.6	73.0
Other development of resources and assistance to industry . . . . .	1.9	1.7	4.6	2.1	2.3
Manufacturing . . . . .	2.9	2.3	0.8	2.2	..
Roads and bridges . . . . .	237.3	246.5	255.7	269.7	294.5
Other transport . . . . .	1.0	1.8	1.8	2.1	2.6
Power, fuel and light . . . . .	57.8	62.8	62.2	62.9	67.4
Other . . . . .	20.3	24.3	35.9	38.0	35.8
<i>Total</i> . . . . .	384.1	407.8	438.2	459.3	495.4
Expenditure on existing assets	-1.5	-2.8	1.2	0.1	0.3
Advances to other sectors . . . . .	0.6	0.9	0.9	1.1	11.3
<i>Total capital outlay</i> . . . . .	383.2	405.8	440.3	460.5	507.0
<i>Total outlay</i> . . . . .	582.4	625.3	675.8	716.5	791.6

**LOCAL AUTHORITIES: RECEIPTS AND OUTLAY, BY STATE, 1969-70**  
(\$ million)

	<i>N.S.W.(a)</i>	<i>Vic.(b)</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
<b>RECEIPTS</b>							
Current receipts—							
Taxes, fees, fines, etc.—							
Rates on land . . . . .	158.6	101.8	50.7	27.8	22.6	11.3	372.8
Licences, etc. . . . .	4.2	2.0	0.9	0.3	6.3	0.2	13.9
Total . . . . .	162.8	103.8	51.6	28.0	28.9	11.5	386.7
Public enterprises—Gross operating surplus . . . . .	70.8	3.2	24.6	-0.1	0.9	3.8	103.1
Interest, rent, royalties and dividends . . . . .	0.7	1.4	..	0.2	0.1	..	2.4
Grants from State . . . . .	2.7	0.1	-0.7	-0.6	-0.3	-1.9	-0.7
Total current receipts . . . . .	237.1	108.5	75.5	27.5	29.6	13.4	491.5
Capital receipts—							
Net borrowing—							
Local authority securities . . . . .	38.8	12.5	32.6	4.1	7.1	4.0	99.1
Advances from State . . . . .	0.3	0.2	6.1	-0.5	..	1.3	7.4
Grants from State . . . . .	32.0	2.7	22.3	5.3	7.8	1.5	71.7
Other funds available (including errors and omissions) . . . . .	15.2	21.0	2.1	3.5	7.6	0.7	50.1
Total capital receipts . . . . .	86.4	36.4	63.1	12.4	22.5	7.5	228.3
Reduction in—							
Cash and bank balances . . . . .	-6.8	-2.1	4.0	2.3	-2.5	-0.8	-6.0
Security holdings . . . . .	2.8	0.1	..	..	..	..	2.8
Total receipts . . . . .	319.4	142.8	142.6	42.1	49.5	20.0	716.5
<b>OUTLAY</b>							
Current outlay—							
Net current expenditure on goods and services—							
Cultural and recreational facilities . . . . .	19.4	13.4	2.8	3.4	5.0	1.1	45.1
Health . . . . .	12.0	10.5	3.5	2.6	1.6	1.0	31.2
Development of resources and assistance to industry . . . . .	1.7	1.1	1.0	0.2	0.1	..	4.0
General administration . . . . .	19.0	20.4	11.5	4.7	4.8	2.2	62.5
Other . . . . .	14.4	3.3	14.6	1.4	0.9	-0.6	33.9
Total . . . . .	66.5	48.7	33.3	12.2	12.4	3.7	176.7
Interest . . . . .	34.4	12.0	22.3	2.9	3.9	3.8	79.3
Total current outlay . . . . .	100.8	60.7	55.6	15.1	16.4	7.5	256.0
Capital outlay—							
Expenditure on new fixed assets—							
Cultural and recreational facilities . . . . .	2.6	5.5	6.0	..	2.8	0.8	17.7
Water supply, sewerage . . . . .	23.9	0.3	35.2	..	0.2	5.1	64.6
Other development of resources and assistance to industry . . . . .	2.1	..	..	..	..	..	2.1
Manufacturing . . . . .	2.2	..	..	..	..	..	2.2
Roads and bridges . . . . .	119.7	60.3	40.4	21.5	20.9	6.9	269.7
Other transport . . . . .	..	..	2.1	..	..	..	2.1
Power, fuel and light . . . . .	52.3	3.0	6.5	0.1	1.0	..	62.9
Other . . . . .	14.7	9.9	-0.2	5.5	8.3	-0.2	38.0
Total . . . . .	217.5	79.0	90.0	27.1	33.2	12.6	459.3
Expenditure on existing assets . . . . .	..	3.1	-3.0	..	..	..	0.1
Advances to other sectors . . . . .	1.1	..	..	..	..	..	1.1
Total capital outlay . . . . .	218.5	82.1	87.0	27.1	33.2	12.6	460.5
Total outlay . . . . .	319.4	142.8	142.6	42.1	49.5	20.0	716.5

(a) Figures relate to the accounting year ended 31 December 1969, and are on an accrual basis as distinct from those for other States which are on a cash basis. (b) Year ended 30 September 1970. Transactions of Private Street Accounts and Separate Rate Accounts are included.

## ALL PUBLIC AUTHORITIES

In the following tables the transactions of the Commonwealth, State and Local authorities have been brought together and consolidated to provide details of the receipts and outlay of the public authority sector as a whole.

## Summary of receipts and outlay

The receipts and outlay of all public authorities for the five year period ended 1970-71 are set out in the following table.

## ALL PUBLIC AUTHORITIES: RECEIPTS AND OUTLAY, 1966-67 TO 1970-71

(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71p
RECEIPTS					
Current receipts—					
Taxes, fees, fines, etc. . . . .	5,460	6,038	6,748	7,724	8,604
Public enterprises—gross operating surplus . . . . .	770	899	1,025	1,141	1,161
Interest, rent, royalties and dividends . . . . .	182	170	191	222	271
<i>Total current receipts . . . . .</i>	<i>6,412</i>	<i>7,106</i>	<i>7,964</i>	<i>9,086</i>	<i>10,034</i>
Capital receipts—					
Net borrowing—					
Government securities—					
Australia . . . . .	546	673	282	636	301
Overseas . . . . .	29	134	142	—131	—74
Local authority and public corporation securities . . . . .	266	303	355	344	376
Net receipts of private trust funds . . . . .	37	65	79	86	120
Other funds available (including errors and omissions) . . . . .	136	131	184	230	190
<i>Total capital receipts . . . . .</i>	<i>1,014</i>	<i>1,305</i>	<i>1,043</i>	<i>1,165</i>	<i>913</i>
Reduction in—					
Cash and bank balances . . . . .	—48	—100	—85	—63	—172
Security holdings . . . . .	—36	—213	—227	—457	—188
<i>Total receipts . . . . .</i>	<i>7,342</i>	<i>8,100</i>	<i>8,695</i>	<i>9,732</i>	<i>10,587</i>
OUTLAY					
Current outlay—					
Net current expenditure on goods and services . . . . .	2,763	3,141	3,431	3,712	4,228
Interest . . . . .	574	632	676	736	783
Cash benefits to persons . . . . .	1,271	1,323	1,444	1,640	1,819
Subsidies . . . . .	159	166	247	236	279
Transfers overseas . . . . .	151	154	160	180	185
Grants for private capital purposes . . . . .	57	76	46	51	53
<i>Total current outlay . . . . .</i>	<i>4,973</i>	<i>5,492</i>	<i>6,004</i>	<i>6,554</i>	<i>7,345</i>
Capital outlay—					
Gross capital formation—					
Expenditure on new fixed assets . . . . .	2,141	2,347	2,518	2,731	2,910
Expenditure on existing assets and stocks . . . . .	22	—9	..	22	61
<i>Total . . . . .</i>	<i>2,163</i>	<i>2,338</i>	<i>2,518</i>	<i>2,752</i>	<i>2,971</i>
Advances to other sectors . . . . .	206	270	174	426	270
<i>Total capital outlay . . . . .</i>	<i>2,369</i>	<i>2,607</i>	<i>2,692</i>	<i>3,178</i>	<i>3,242</i>
<i>Total outlay . . . . .</i>	<i>7,342</i>	<i>8,100</i>	<i>8,695</i>	<i>9,732</i>	<i>10,587</i>

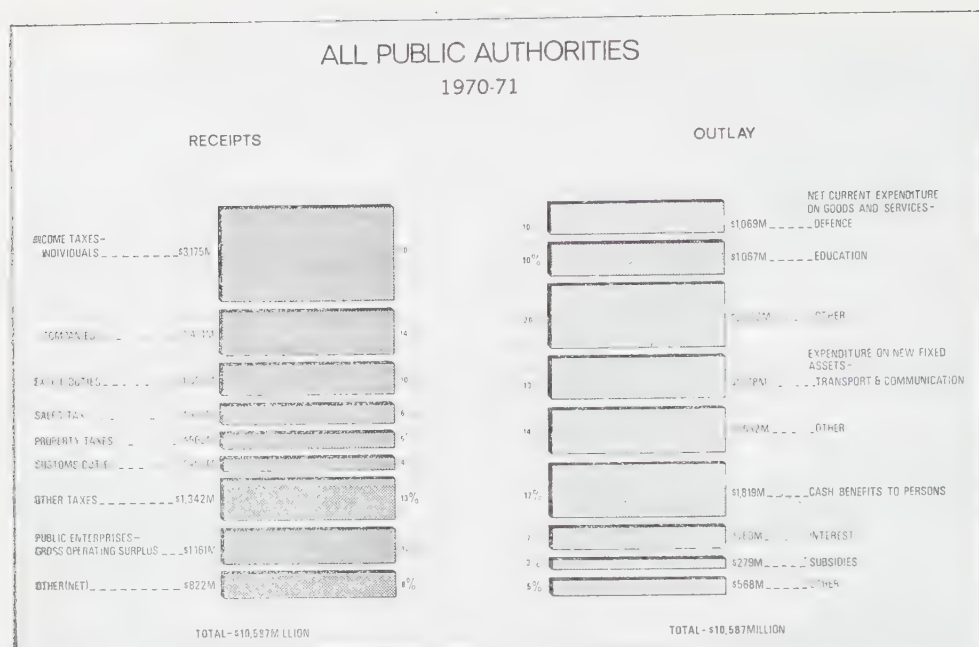


PLATE 35

**Main components of outlay**

The following tables provide functional dissections for the years 1966-67 to 1970-71 of the net current expenditure on goods and services and expenditure on new fixed assets of all public authorities as an indication of the purposes being served by the various programmes of government.

**ALL PUBLIC AUTHORITIES: NET CURRENT EXPENDITURE ON GOODS AND SERVICES,  
CLASSIFIED BY FUNCTION, 1966-67 TO 1970-71**

(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71p
Law, order and public safety . . . . .	158	173	192	218	249
Education . . . . .	579	654	741	880	1,067
Cultural and recreational facilities . . . . .	102	113	124	139	151
Health . . . . .	283	318	360	413	503
Welfare . . . . .	52	59	66	77	91
Defence . . . . .	877	1,041	1,079	1,018	1,069
Repatriation . . . . .	67	72	77	84	93
Development of resources and assistance to industry . . . . .	211	229	255	280	309
Transport and communication . . . . .	40	44	47	52	59
Legislature . . . . .	23	23	24	28	32
General administration . . . . .	212	233	257	291	338
Foreign affairs . . . . .	18	23	26	31	35
Immigration . . . . .	36	39	54	60	60
Regulation of trade and industry . . . . .	21	23	24	27	31
Housing . . . . .	5	5	6	6	7
Other . . . . .	26	28	28	32	48
Not allocated to function . . . . .	53	62	71	76	85
<b>Total . . . . .</b>	<b>2,763</b>	<b>3,141</b>	<b>3,431</b>	<b>3,712</b>	<b>4,228</b>



**ALL PUBLIC AUTHORITIES: EXPENDITURE ON NEW FIXED ASSETS, CLASSIFIED  
BY FUNCTION, 1966-67 TO 1970-71**

(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71 <sup>p</sup>
Law, order and public safety . . . . .	15	17	23	23	25
Education . . . . .	170	179	204	227	255
Cultural and recreational facilities . . . . .	31	33	34	37	42
Health . . . . .	71	68	77	85	89
Welfare . . . . .	3	6	7	7	9
Repatriation . . . . .	1	2	2	2	5
Development of resources and assistance to industry . . . . .	297	326	347	394	434
Manufacturing . . . . .	8	6	4	6	7
Transport and communication . . . . .	977	1,109	1,191	1,287	1,378
Power, fuel and light . . . . .	405	413	424	442	418
Housing . . . . .	67	75	77	88	99
Other . . . . .	84	104	117	115	137
Not allocated to function . . . . .	12	10	10	16	12
<b>Total . . . . .</b>	<b>2,141</b>	<b>2,347</b>	<b>2,518</b>	<b>2,731</b>	<b>2,910</b>

**Main components of receipts**

Taxes and net borrowing constitute the main sources of financing of the activities of the public authorities. Details of the debt of public authorities are given in the next section of this chapter. Taxation, by type of tax, for the years 1966-67 to 1970-71 was as follows.

**ALL PUBLIC AUTHORITIES: TAXATION, BY TYPE OF TAX, 1966-67 TO 1970-71**

(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71 <sup>p</sup>
Income tax—					
Individuals . . . . .	1,921	2,175	2,377	2,855	3,175
Companies(a) . . . . .	805	856	1,033	1,191	1,431
Estate, gift, probate and succession duties . . . . .	156	182	204	217	227
Customs duties . . . . .	275	312	346	414	466
Excise duties . . . . .	806	855	902	939	1,053
Sales tax . . . . .	381	417	494	569	633
Primary production taxes . . . . .	31	32	34	33	27
Payroll tax . . . . .	172	184	206	230	248
Property taxes . . . . .	372	403	429	459	505
Liquor taxes . . . . .	31	35	39	41	45
Taxes on gambling . . . . .	86	97	107	120	131
Taxes on ownership and operation of motor vehicles . . . . .	188	206	227	245	260
Stamp duties, n.e.i. . . . .	125	158	207	259	243
Licences and registration fees, n.e.i. . . . .	48	51	59	63	66
Other taxes, fees, fines, etc. . . . .	63	74	83	89	94
<b>Total . . . . .</b>	<b>5,460</b>	<b>6,038</b>	<b>6,748</b>	<b>7,724</b>	<b>8,604</b>

(a) Taxes paid by Commonwealth public enterprises have been offset. Includes dividend and interest (withholding) taxes.

**Level of government**

In the following tables details are given for 1969-70 of the receipts and outlay of all public authorities, broken down by level of government in order to show their relative contributions to various expenditure programmes, and their roles in financing these programmes through taxes and transfers.

**ALL PUBLIC AUTHORITIES: RECEIPTS AND OUTLAY, BY LEVEL OF  
GOVERNMENT, 1969-70**

**I. RECEIPTS**

(\$ million)

	<i>Common- wealth authorities</i>	<i>State authorities</i>	<i>Local authorities</i>	<i>All public authorities</i>
<b>Current Receipts—</b>				
Taxes, fees, fines, etc.—				
Income tax—				
Individuals . . . . .	2,855	..	..	2,855
Companies(a) . . . . .	1,191	..	..	1,191
Estate, gift, probate and succession duties . . . . .	80	137	..	217
Customs duties . . . . .	414	..	..	414
Excise duties . . . . .	939	..	..	939
Sales tax . . . . .	569	..	..	569
Payroll tax . . . . .	230	..	..	230
Primary production taxes and charges . . . . .	33	..	..	33
Property taxes . . . . .	1	85	373	459
Liquor taxes . . . . .	..	41	..	41
Taxes on gambling . . . . .	..	120	..	120
Taxes on ownership and operation of motor vehicles . . . . .	1	238	5	245
Stamp duties, n.e.i. . . . .	2	257	..	259
Broadcasting listeners' and television viewers' licences . . . . .	48	..	..	48
Licences and registration fees, n.e.i. . . . .	2	6	7	15
Other taxes, fees, fines, etc. . . . .	15	72	2	89
<i>Total taxes, etc.</i> . . . . .	6,382	956	387	7,724
Public enterprises—gross operating surplus . . . . .	435	602	103	1,140
Interest, rent, royalties and dividends . . . . .	80	139	2	222
Grants—				
from Commonwealth . . . . .	—1,309	1,309	..	..
from State . . . . .	..	1	—1	..
<i>Total current receipts available for own   functions</i> . . . . .	5,588	3,007	491	9,086
<b>Capital receipts—</b>				
Net borrowing—				
Government securities—				
Australia . . . . .	57	579	..	636
Overseas . . . . .	—42	—89	..	—131
Local authority and public corporation securities . . . . .	12	233	99	344
Net receipts of private trust funds . . . . .	61	25	..	86
Net advances—				
from Commonwealth . . . . .	—175	175	..	..
from State . . . . .	..	—7	7	..
Grants—				
from Commonwealth . . . . .	—312	312	..	..
from State . . . . .	..	—72	72	..
Other funds available . . . . .	81	99	50	230
<i>Total capital receipts available for own   functions</i> . . . . .	—318	1,255	228	1,165
<b>Reduction in—</b>				
Cash and bank balances . . . . .	—34	—23	—6	—63
Security holdings . . . . .	—374	—86	3	—457
<b>Total funds available for own functions</b> . . . . .	<b>4,863</b>	<b>4,152</b>	<b>717</b>	<b>9,732</b>

(a) Taxes paid by Commonwealth public enterprises have been offset. Includes dividend and interest (withholding) taxes.

ALL PUBLIC AUTHORITIES: RECEIPTS AND OUTLAY BY LEVEL OF GOVERNMENT  
1969-70—continued

## II. OUTLAY

(\$ million)

	<i>Common- wealth authorities</i>	<i>State authorities</i>	<i>Local authorities</i>	<i>All public authorities</i>
<b>Expenditure on goods and services—</b>				
Law, order and public safety . . . . .	17	224	..	241
Education . . . . .	59	1,047	..	1,106
Cultural and recreational facilities . . . . .	81	32	63	176
Health . . . . .	39	428	31	499
Welfare . . . . .	34	49	1	84
Defence . . . . .	1,017	1	..	1,018
Repatriation . . . . .	87	..	..	87
Development of resources and assistance to industry . . . . .	188	415	71	674
Manufacturing . . . . .	1	3	2	7
Transport and communication . . . . .	531	536	272	1,339
Power, fuel and light . . . . .	42	338	63	443
Housing . . . . .	24	70	..	94
Other . . . . .	363	179	134	676
<i>Total</i> . . . . .	<i>2,484</i>	<i>3,322</i>	<i>636</i>	<i>6,442</i>
<i>of which—</i>				
Net current expenditure on goods and services . . . . .	1,817	1,718	177	3,712
Expenditure on new fixed assets—				
Public enterprises . . . . .	511	856	135	1,502
General government . . . . .	156	749	324	1,229
Expenditure on existing assets and stocks . . . . .	—3	25	..	22
<b>Current transfers—</b>				
Interest . . . . .	23	633	79	736
Cash benefits to persons . . . . .	1,598	42	..	1,640
Subsidies . . . . .	215	21	..	236
Transfers overseas . . . . .	180	..	..	180
Grants for private capital purposes . . . . .	33	18	..	51
<i>Total</i> . . . . .	<i>2,049</i>	<i>714</i>	<i>79</i>	<i>2,843</i>
<b>Capital transfers—</b>				
Net advances to other sectors . . . . .	334	91	1	426
<i>Total outlay</i> . . . . .	<i>4,863</i>	<i>4,152</i>	<i>717</i>	<i>9,732</i>

## PUBLIC SECTOR BORROWING

Figures given in this section do not purport to show either 'public debt' or 'net public' debt, but are designed to provide details of securities issued on behalf of the Commonwealth and the States, together with details of securities issued and other forms of debt outstanding in respect of local authorities and State authorities with independent borrowing powers.

This information cannot be aggregated, without adjustment, to provide a measure of the 'debt' of public authorities for a number of reasons. There are forms of debt not evidenced by the issue of securities, such as Commonwealth advances to the States for specific capital purposes—of which the advances made under the Commonwealth-State Housing Agreements would be the most important example. Governments themselves maintain significant holdings of their own securities: for example, the Commonwealth Government, in the National Debt Sinking Fund, the Loan Consolidation and Investment Reserve, and in other Trust Funds, holds large investments in securities issued either directly by itself or on behalf of the States. Some of the securities issued on behalf of the States and

held by the Commonwealth represent the proceeds of overseas loans, securities for which were issued directly by the Commonwealth—the Australian currency counterpart proceeds of the loans being invested in special loans to finance State works programmes. A number of State public corporations and local authorities also maintain significant investments in government securities (including their own securities). Aggregation of the figures for securities on issue which follow would clearly involve a substantial degree of duplication; the sum of securities on issue therefore cannot be regarded as representing 'net public debt'.

### Commonwealth and States: Loan transactions and Government securities on issue

Under the 1927 Financial Agreement between the Commonwealth and the States, the Commonwealth Government accepted responsibility for the securities of State governments then on issue, and was empowered to arrange for all future borrowings on behalf of the Commonwealth and the States and to issue Commonwealth securities for all money borrowed. The Commonwealth is reimbursed by the States for interest, exchange, etc., paid on their behalf, and the securities are redeemed from the National Debt Sinking Fund to which both the Commonwealth and State Governments make contributions.

In the tables which follow, details are given of transactions in Commonwealth securities issued on account of the Commonwealth and the States, together with details of securities on issue, annual interest liability and average rate of interest liability. Amounts relating to overseas loans are shown in the currencies in which the loans are repayable, and in Australian currency equivalent calculated on the basis of the International Monetary Fund par rates of exchange (and the calculated equivalent for Swiss francs) ruling at 30 June in each year shown. All amounts shown are at face value.

For further information relating to securities issued by the governments of the Commonwealth and the States reference should be made to the Commonwealth Budget paper *Government Securities on Issue*.

#### Net movement in securities on issue

Summary details of the net movement in securities issued for Commonwealth purposes and on account of the States during the period 1966–67 to 1970–71, are given in the following group of tables. Also provided is a table (page 594) which sets out the balance of securities on issue at 30 June 1970 and 1971, and the composition of the change in these balances.

#### NET MOVEMENT IN GOVERNMENT SECURITIES ON ISSUE, 1966-67 TO 1970-71 (\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71
NEW SECURITIES ISSUED					
Securities repayable in Australian currency—					
Inscribed stock and bonds . . . . .	718.3	717.4	633.7	902.1	808.3
Special bonds . . . . .	84.3	78.7	73.4	134.0	233.1
Drought bonds . . . . .	..	..	..	1.7	0.4
Advance loan subscriptions . . . . .	9.3	0.9	7.6	..	8.2
Overdue securities . . . . .	..	..	..	..	..
Tax-free stock . . . . .	..	..	..	..	..
Debentures . . . . .	..	..	..	..	..
Stock issued to Government Savings banks under special agreements(a) . . . . .	19.7	18.0	13.4	16.1	15.0
Treasury notes . . . . .	..	185.3	..	46.5	17.9
Treasury bills—					
Internal . . . . .	..	5.5	174.2	172.1	8.2
Public . . . . .	149.0	140.0	..	..	..
<i>Total</i> . . . . .	980.5	1,145.7	902.3	1,272.5	1,091.1
Securities repayable in overseas currencies(b) . . . . .	176.1	271.7	273.6	111.0	125.0
<b>Total new securities issued</b> . . . . .	<b>1,156.6</b>	<b>1,417.4</b>	<b>1,175.9</b>	<b>1,383.6</b>	<b>1,216.1</b>

For footnotes see next page.



NET MOVEMENT IN GOVERNMENT SECURITIES ON ISSUE, 1966-67 TO 1970-71—*continued*  
(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71
REDEMPTIONS, REPURCHASES, CANCELLATIONS(c)					
Securities repayable in Australian currency—					
Inscribed stock and bonds . . . . .	218.8	333.7	191.8	341.9	612.4
Special bonds . . . . .	47.0	37.2	46.3	80.6	148.8
Drought bonds . . . . .	..	..	..	0.7	0.7
Advance loan subscriptions . . . . .	..	..	..	21.1	..
Overdue securities . . . . .	-2.2	-1.5	6.3	-2.4	1.2
Tax-free stock . . . . .	0.2	0.1	..	0.5	..
Debentures . . . . .	2.3	2.4	2.5	2.6	2.7
Stock issued to Government Savings banks under special agreements(a) . . . . .	3.2	3.5	3.4	3.7	4.0
Treasury notes . . . . .	27.5	..	68.3	..	..
Treasury bills—					
Internal . . . . .	2.0	..	..	..	..
Public . . . . .	139.0	89.0	127.0	14.0	..
<i>Total</i> . . . . .	437.9	464.3	445.8	462.8	769.8
Securities repayable in overseas currencies(b) . . . . .	148.4	245.7	134.3	228.5	159.3
<b>Total redemptions, etc.</b> . . . . .	<b>586.3</b>	<b>710.0</b>	<b>580.1</b>	<b>691.2</b>	<b>929.1</b>

## NET MOVEMENT

Securities repayable in Australian currency—					
Inscribed stock and bonds . . . . .	499.4	383.7	441.9	560.1	195.9
Special bonds . . . . .	37.3	41.5	27.1	53.4	84.4
Drought bonds . . . . .	..	..	..	0.9	-0.3
Advance loan subscriptions . . . . .	9.2	0.9	7.6	-21.2	8.2
Overdue securities . . . . .	2.2	1.5	-6.5	2.4	-1.2
Tax-free stock . . . . .	-0.2	-0.1	..	-0.5	..
Debentures . . . . .	-2.3	-2.4	-2.5	-2.6	-2.7
Stock issued to Government Savings banks under special agreements(a) . . . . .	16.4	14.5	10.0	12.4	11.0
Treasury notes . . . . .	-27.5	185.3	-68.3	46.5	17.9
Treasury bills—					
Internal . . . . .	-2.0	5.5	174.2	172.1	8.2
Public . . . . .	10.0	51.0	-127.0	-14.0	..
<i>Total</i> . . . . .	542.6	681.4	456.5	809.7	321.3
Securities repayable in overseas currencies(b) . . . . .	27.7	26.0	139.3	-117.4	-34.3
<b>Net movement in securities on issue</b> . . . . .	<b>570.3</b>	<b>707.4</b>	<b>595.8</b>	<b>692.3</b>	<b>287.0</b>

(a) Recorded in Commonwealth Loan Fund as State domestic raisings. (b) Australian currency equivalent at rates of exchange ruling at 30 June in each of the years shown. (c) Includes conversions from one type of security to another, which affect the net movements of individual loan categories, but do not affect the overall net movement.

The net movement in securities on issue may be reconciled with the Budget deficit, as shown in the following table. For details relating to the financing of the budget deficit see page 538.

# RECONCILIATION OF DEFICIT WITH NET MOVEMENT IN SECURITIES ON ISSUE (\$ million)

(Source: Supplement to the Treasury Information Bulletin, August 1971)

	1966-67	1967-68	1968-69	1969-70	1970-71
Net movement in securities on issue . . . . .	570	707	596	692	287
Less net increase in securities on issue held by Trust Fund(a) . . . . .	10	-146	-268	-512	-88
	580	561	328	180	199
Adjustment from face value to cash basis . . . . .	..	(b)103	..	(c)-18	(d)-21
	580	664	328	163	179
Less increases in net assets of Commonwealth—					
Cash balances . . . . .	-1	..	..	-19	-157
International Monetary Fund . . . . .	-27	-59	-5	..	-37
Other(a) . . . . .	..	37	62	(e)-137	(e)91
Deficit . . . . .	552	642	385	7	75

(a) Excludes investment of other than Commonwealth balances in the Trust Fund. (b) Includes adjustment of Australian currency equivalent of Sterling debt, following devaluation of Sterling. See page 19 of the white paper, *Government Securities on Issue at 30 June 1968*. (c) Includes adjustment of Australian currency equivalent of Canadian and West German debt, following variation in the rate of exchange of the Canadian dollar and revaluation of the Deutsche Mark. (d) Includes adjustment of Australian currency equivalent following variation in the rates of exchange of the Canadian dollar, the Netherlands guilder and the Deutsche Mark and the revaluation of the Swiss franc. (e) Includes advance to Wheat Board, \$184 million in 1969-70 and repayment of advance, \$65 million in 1970-71.

## NET MOVEMENT IN GOVERNMENT SECURITIES ON ISSUE, 1970-71 (\$ million)

	Securities on issue at 30 June 1970	Change during 1970-71		Securities on issue at 30 June 1971	Net movement
		New Securities issued	Redemptions, repurchases, cancellations (a)		
Securities repayable in Australian currency—					
Commonwealth—					
Inscribed stock and bonds . . . . .	1,284.2	109.5	-246.0	1,147.6	-136.6
Special bonds . . . . .	238.3	67.9	-67.3	238.9	+0.6
Drought bonds . . . . .	0.9	0.4	-0.7	0.7	-0.3
Advance loan subscriptions . . . . .	5.4	8.2	..	13.6	+8.2
Overdue securities . . . . .	6.6	..	-1.2	5.4	-1.2
Treasury notes . . . . .	252.0	17.9	..	269.8	+17.9
Treasury bills—					
Internal . . . . .	1,031.3	8.2	..	1,039.5	+8.2
Public . . . . .	..	..	..	..	..
Total . . . . .	2,818.6	212.1	-315.3	2,715.5	-103.2
States—					
Inscribed stock and bonds . . . . .	7,983.8	698.9	-366.4	8,316.5	+332.5
Special bonds . . . . .	495.2	165.2	-81.5	578.9	+83.7
Tax-free stock . . . . .	16.0	..	..	16.0	..
Stock issued to Government Savings banks under special agreement(b) . . . . .	266.0	15.0	-4.0	277.0	+11.0
Debentures . . . . .	45.1	..	-2.7	42.4	-2.7
Overdue securities . . . . .	..	..	..	..	..
Total . . . . .	8,806.1	879.0	-454.6	9,230.6	+424.5
Total securities repayable in Australian currency . . . . .	11,624.7	1,091.1	-769.8	11,946.1	+321.3
Securities repayable in overseas currencies(c)—					
Commonwealth—					
Public loans . . . . .	445.9	..	-7.5	438.4	-7.5
Export-Import Bank loans—					
Defence equipment . . . . .	260.4	63.3	-57.1	266.6	+6.2
Aircraft . . . . .	45.4	n.a.	n.a.	53.2	+7.8
Other . . . . .	43.4	..	-2.5	41.0	-2.5
International Bank Loans . . . . .	130.4	..	-15.1	115.3	-15.1
Private loans—					
Aircraft . . . . .	67.6	n.a.	n.a.	79.3	+11.7
Other purposes . . . . .	73.2	14.8	3.6	91.6	+18.4
Total . . . . .	1,066.3	125.0	-105.8	1,085.4	+19.0
States . . . . .	514.0	..	-53.5	460.5	-53.5
Total securities repayable in overseas currencies . . . . .	1,580.2	125.0	-159.3	1,545.9	-34.3

(a) Including conversions from one type of security to another.  
currency equivalents at rates of exchange ruling at 30 June 1971.

(b) i.e. State domestic raisings.

(c) Australian

**Government securities on issue, annual interest payable, and average rate of interest**

The following tables provide details of government securities on issue on account of the Commonwealth and the States, repayable in Australian and in overseas currencies, and show, for recent years, the securities on issue maturing in Australia classified by holder. Also shown are details of annual interest payable on securities on issue in Australia and overseas, and the average rate of interest liability.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES**  
**30 JUNE 1967 TO 1971**  
 (\$ million)

	30 June—				
	1967	1968	1969	1970	1971
<b>For Commonwealth purposes—</b>					
Repayable in Australian currency—					
Inscribed stock and bonds . . . . .	1,459.0	1,347.6	1,279.9	1,284.2	1,147.6
Special bonds . . . . .	187.3	198.1	201.8	238.3	238.9
Drought bonds . . . . .	..	..	..	0.9	0.7
Advance subscriptions . . . . .	17.9	18.8	26.5	5.4	13.6
Overdue securities . . . . .	9.2	10.7	4.1	6.6	5.4
Treasury notes . . . . .	88.5	273.7	205.4	252.0	269.8
Treasury bills—					
Internal . . . . .	679.5	685.0	859.2	1,031.2	1,039.5
Public . . . . .	90.0	141.0	14.0	..	..
<i>Total</i> . . . . .	<i>2,531.4</i>	<i>2,675.0</i>	<i>2,591.0</i>	<i>2,818.6</i>	<i>2,715.5</i>
Repayable in overseas currencies(a) . . . . .	743.9	925.3	1,091.2	1,066.3	1,085.4
<i>Total Commonwealth</i> . . . . .	<i>3,275.3</i>	<i>3,600.3</i>	<i>3,682.1</i>	<i>3,884.9</i>	<i>3,800.9</i>
<b>On account of States—</b>					
Repayable in Australian currency—					
Inscribed stock and bonds . . . . .	6,423.2	6,918.3	7,427.9	7,983.8	8,316.3
Special bonds . . . . .	424.2	454.9	478.3	495.2	578.9
Tax-free stock . . . . .	16.6	16.5	16.5	16.0	16.0
Stock issued to Government Savings banks under special agreements . . . . .	229.1	243.6	253.6	266.0	277.0
Debentures . . . . .	52.5	50.2	47.7	45.1	42.4
Overdue securities . . . . .	..	..	..	..	..
<i>Total</i> . . . . .	<i>7,145.7</i>	<i>7,683.5</i>	<i>8,224.0</i>	<i>8,806.1</i>	<i>9,230.6</i>
Repayable in overseas currencies(a) . . . . .	788.4	633.0	606.5	514.0	460.5
<i>Total States</i> . . . . .	<i>7,934.1</i>	<i>8,316.5</i>	<i>8,830.5</i>	<i>9,320.1</i>	<i>9,691.1</i>
<i>of which—</i>					
New South Wales . . . . .	2,666.9	2,772.8	2,931.3	3,078.7	3,192.9
Victoria . . . . .	1,893.1	1,998.6	2,130.3	2,254.4	2,347.8
Queensland . . . . .	1,038.9	1,094.9	1,164.9	1,236.0	1,289.5
South Australia . . . . .	1,027.1	1,077.0	1,145.8	1,211.3	1,256.9
Western Australia . . . . .	772.5	804.9	851.5	896.0	932.6
Tasmania . . . . .	535.6	568.3	606.7	643.8	671.3
<b>Total Commonwealth and States</b> . . . . .	<b>11,209.4</b>	<b>11,916.8</b>	<b>12,512.6</b>	<b>13,205.0</b>	<b>13,492.0</b>

(a) Australian currency equivalent.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATE  
MATURING IN AUSTRALIA, BY HOLDER(a), 30 JUNE 1967 TO 1971**

(\$ million)

(Source: Reserve Bank of Australia *Statistical Bulletin*)

Holder	30 June—				
	1967	1968	1969	1970	1971
Reserve Bank of Australia . . . . .	815	1,041	846	1,190	910
Trading banks . . . . .	1,201	1,194	1,367	1,279	1,441
Savings banks . . . . .	2,178	2,258	2,285	2,229	2,292
Other banking institutions . . . . .	4	7	12	1	1
Life assurance offices . . . . .	978	1,093	1,150	1,195	1,325
Fire, marine and general insurance offices . . . . .	118	123	126	128	120
Other private financial institutions—					
Pension and provident funds . . . . .	155	174	192	222	249
Friendly societies, hospital and medical funds . . . . .	20	25	29	29	31
Trustee companies . . . . .	123	122	115	113	108
Pastoral finance companies . . . . .	26	35	37	25	16
Money market dealers . . . . .	464	494	524	597	694
Miscellaneous . . . . .	47	80	104	61	74
Government financial institutions—					
Insurance offices and funds . . . . .	113	121	137	149	154
Pension and provident funds . . . . .	176	173	195	204	238
Public trustees . . . . .	31	28	26	24	26
All other(b) . . . . .	2	4	3	3	2
Public authorities (excluding finance)—					
Commonwealth Government (including Common- wealth semi-government) . . . . .	1,640	1,789	2,067	2,577	2,661
State Government . . . . .	26	58	57	40	39
Local government and State semi-government . . . . .	231	245	233	218	191
Companies (excluding finance) . . . . .	188	145	183	174	118
Other holders—					
Marketing boards . . . . .	4	6	3	3	3
Farmers . . . . .	97	87	83	80	76
Non-profit organisations . . . . .	51	52	48	51	50
All other . . . . .	989	1,003	993	1,032	1,124
<b>Total . . . . .</b>	<b>9,677</b>	<b>10,358</b>	<b>10,815</b>	<b>11,625</b>	<b>11,946</b>

(a) Total stock inscribed, bonds in circulation, amounts paid up on outstanding applications, in transit claims and advance applications, Commonwealth Treasury Bills and Treasury Notes, debentures, and Savings Certificates.

(b) Includes securities held by Commonwealth Development Bank of Australia.



**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES  
REPAYABLE IN OVERSEAS CURRENCIES, 30 JUNE 1967 TO 1971**

		30 June				
		1967	1968	1969	1970	1971
For Commonwealth purposes—						
Sterling	£stg m	69.3	80.4	80.0	69.9	69.2
United States dollars	US\$ m	516.5	705.1	748.1	687.2	691.9
Canadian dollars	Can\$ m	48.5	39.9	29.7	24.8	12.3
Swiss francs	Sw F m	239.7	239.7	239.7	249.6	249.6
Netherlands guilders	f. m	7.2	6.7	6.2	5.7	65.2
Deutsche Marks	DM m	84.6	178.2	791.7	938.7	931.2
Total—Australian currency equivalent(a)		743.9	925.3	1,091.2	1,066.3	1 085.4
On account of States—						
Sterling	£stg m	233.9	206.6	200.3	164.7	149.7
United States dollars	US\$ m	194.8	181.1	167.3	149.8	126.2
Canadian dollars	Can\$ m	13.9	13.0	12.8	12.2	11.6
Swiss francs	Sw F m	50.3	50.3	50.3	50.3	50.3
Netherlands guilders	f. m	32.9	30.7	28.5	26.3	24.1
Total—Australian currency equivalent(a)		788.4	633.0	606.5	514.0	460.5
Total—Commonwealth and States—Australian currency equivalent(a)						
		1,532.4	1,558.4	1,697.7	1,580.2	1,545.9

(a) Australian currency equivalent at rates of exchange ruling at 30 June in each of the years shown.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES  
REPAYABLE IN OVERSEAS CURRENCIES  
30 JUNE 1971**

	Currency in which repayable						Total— Australian Currency equivalent (a)
	<i>Sterling</i>	<i>United States dollars</i>	<i>Canadian dollars</i>	<i>Swiss francs</i>	<i>Netherland guilders</i>	<i>Deutsche Marks</i>	
	£stg m	US\$ m	Can\$ m	Sw F m	f m	DM m	\$A m
<i>For Commonwealth purposes—</i>							
Public loans . . . . .	69.2	105.2	2.2	239.7	5.2	550.0	438.4
Export-Import Bank loans—							
Defence equipment . . . . .	..	298.6	..	..	..	..	266.6
Aircraft . . . . .	..	59.6	..	..	..	..	53.2
Other . . . . .	..	45.9	..	..	..	..	41.0
International Bank loans . . . . .	..	99.7	8.6	..	..	73.7	115.3
Private loans—							
Aircraft . . . . .	..	82.8	1.5	9.9	..	7.5	79.3
Other purposes . . . . .	..	..	..	..	60.0	300.0	91.6
<i>Total . . . . .</i>	<i>69.2</i>	<i>691.9</i>	<i>12.3</i>	<i>249.6</i>	<i>65.2</i>	<i>931.2</i>	<i>1,085.4</i>
<i>On account of States—</i>							
New South Wales . . . . .	79.4	47.3	3.6	15.8	7.6	..	220.8
Victoria . . . . .	19.8	26.6	2.9	12.7	6.1	..	73.1
Queensland . . . . .	11.2	20.1	1.5	6.4	3.1	..	45.3
South Australia . . . . .	14.4	14.7	1.6	6.8	3.1	..	47.6
Western Australia . . . . .	21.8	8.3	1.1	4.9	2.4	..	56.8
Tasmania . . . . .	3.1	9.2	0.9	3.7	1.8	..	16.8
<i>Total . . . . .</i>	<i>149.7</i>	<i>126.2</i>	<i>11.6</i>	<i>50.3</i>	<i>24.1</i>	<i>..</i>	<i>460.5</i>
<b>Total Commonwealth and States . . . . .</b>	<b>218.9</b>	<b>818.1</b>	<b>23.8</b>	<b>299.9</b>	<b>89.3</b>	<b>931.2</b>	<b>1,545.9</b>

(a) At rates of exchange ruling at 30 June 1971.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES**  
**ANNUAL INTEREST PAYABLE, 30 JUNE 1967 TO 1971**

		30 June—				
		1967	1968	1969	1970	1971
AMOUNT						
<b>For Commonwealth purposes—</b>						
Australian currency . . .	\$A m	91.8	96.1	91.5	101.5	99.5
Sterling . . . . .	£Stg m	3.4	4.3	4.2	3.9	3.9
United States dollars . . .	US\$ m	26.6	36.8	39.1	35.9	38.1
Canadian dollars . . . . .	Can\$ m	2.2	1.9	1.4	1.2	0.6
Swiss francs . . . . .	SwF m	10.5	10.5	11.4	13.6	13.6
Netherlands guilders . . .	f m	0.4	0.3	0.3	0.3	4.9
Deutsche Marks . . . . .	DM m	4.8	11.0	50.4	61.1	60.6
<b>Total Commonwealth—Australian currency equivalent(a) . . . . .</b>	<b>\$A m</b>	<b>129.2</b>	<b>144.3</b>	<b>150.3</b>	<b>160.6</b>	<b>162.0</b>
<b>On account of States—</b>						
Australian currency . . . .	\$A m	344.6	373.1	404.9	449.3	496.1
Sterling . . . . .	£Stg m	9.9	8.9	8.7	7.5	6.9
United States dollars . . . .	US\$ m	10.2	9.5	8.7	7.9	6.8
Canadian dollars . . . . .	Can\$ m	0.8	0.7	0.7	0.7	0.7
Swiss francs . . . . .	SwF m	2.3	2.3	2.3	2.3	2.3
Netherlands guilders . . . .	f m	1.6	1.5	1.4	1.3	1.2
<b>Total States—Australian currency equivalent(a) . . . . .</b>	<b>\$A m</b>	<b>379.9</b>	<b>402.2</b>	<b>432.8</b>	<b>473.9</b>	<b>518.3</b>
<b>Total Commonwealth and States—Australian currency equivalent(a) . . . . .</b>	<b>\$A m</b>	<b>509.1</b>	<b>546.5</b>	<b>583.1</b>	<b>634.5</b>	<b>680.2</b>

**AVERAGE RATE OF INTEREST LIABILITY**  
**(Per cent)**

<b>For Commonwealth purposes—</b>						
Australian currency . . . . .		3.63	3.60	3.53	3.60	3.66
Sterling . . . . .		4.86	5.29	5.29	5.57	5.57
United States dollars . . . . .		5.15	5.23	5.23	5.22	5.50
Canadian dollars . . . . .		4.63	4.70	4.72	4.69	5.18
Swiss francs . . . . .		4.40	4.40	4.77	5.44	5.44
Netherlands guilders . . . . .		5.00	5.00	5.00	5.00	7.53
Deutsche Marks . . . . .		5.68	6.17	6.37	6.51	6.51
<b>Total Commonwealth—Australian currency equivalent(a) . . . . .</b>		<b>3.94</b>	<b>4.02</b>	<b>4.08</b>	<b>4.13</b>	<b>4.26</b>
<b>On account of States—</b>						
Australian currency . . . . .		4.82	4.86	4.92	5.10	5.37
Sterling . . . . .		4.22	4.32	4.35	4.56	4.59
United States dollars . . . . .		5.25	5.25	5.21	5.29	5.36
Canadian dollars . . . . .		5.75	5.75	5.75	5.75	5.75
Swiss francs . . . . .		4.50	4.50	4.50	4.50	4.50
Netherlands guilders . . . . .		5.00	5.00	5.00	5.00	5.00
<b>Total States—Australian currency equivalent(a) . . . . .</b>		<b>4.79</b>	<b>4.84</b>	<b>4.90</b>	<b>5.08</b>	<b>5.35</b>
<b>Total Commonwealth and States—Australian currency equivalent(a) . . . . .</b>		<b>4.54</b>	<b>4.59</b>	<b>4.66</b>	<b>4.80</b>	<b>5.04</b>

(a) At rates of exchange ruling at 30 June in each of the years shown.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES**  
**ANNUAL INTEREST PAYABLE, 30 JUNE 1971**

	Currency in which payable							Total— Australian currency equiva- lent(a)
	Australian currency	Sterling	United States dollars	Canadian dollars	Swiss francs	Nether- lands guilders	Deutsche Marks	
For Commonwealth purposes	\$Am 99.5	£Stgm 3.9	US\$m 38.1	Can\$m 0.6	SwFm 13.6	fm 4.9	DMm 60.6	\$Am 162.0
On account of States—								
New South Wales . . .	160.0	3.8	2.5	0.2	0.7	0.4	..	170.8
Victoria . . .	123.2	1.1	1.4	0.2	0.6	0.3	..	127.1
Queensland . . .	65.3	0.5	1.1	0.1	0.3	0.2	..	67.6
South Australia . . .	65.3	0.5	0.8	0.1	0.3	0.2	..	67.3
Western Australia . . .	47.1	0.8	0.4	0.1	0.2	0.1	..	49.3
Tasmania . . .	35.3	0.2	0.5	..	0.2	0.1	..	36.2
<i>Total States</i> . . .	<i>496.3</i>	<i>6.9</i>	<i>6.8</i>	<i>0.7</i>	<i>2.3</i>	<i>1.2</i>	<i>..</i>	<i>518.3</i>
Total—								
Currencies in which repayable . . .	595.6	10.7	44.8	1.3	15.8	6.1	60.6	..
Australian currency equivalent(a) \$Am	595.6	23.0	40.0	1.1	3.5	1.5	15.5	680.2

**AVERAGE RATE OF INTEREST LIABILITY**  
**(Per cent)**

For Commonwealth purposes	3.66	5.57	5.50	5.18	5.44	7.53	6.51	4.26
On account of States—								
New South Wales . . .	5.38	4.76	5.38	5.75	4.50	5.00	..	5.35
Victoria . . .	5.41	5.51	5.31	5.75	4.50	5.00	..	5.41
Queensland . . .	5.25	4.80	5.43	5.75	4.50	5.00	..	5.24
South Australia . . .	5.40	3.75	5.34	5.75	4.50	5.00	..	5.36
Western Australia . . .	5.38	3.52	5.26	5.75	4.50	5.00	..	5.28
Tasmania . . .	5.40	5.00	5.43	5.75	4.50	5.00	..	5.39
<i>Total States</i> . . .	<i>5.37</i>	<i>4.59</i>	<i>5.36</i>	<i>5.75</i>	<i>4.50</i>	<i>5.00</i>	<i>..</i>	<i>5.35</i>
Grand total . . .	4.99	4.90	5.48	5.45	5.28	6.85	6.51	5.04

(a) At rates of exchange ruling at 30 June 1971.

## National Debt Sinking Fund

### Securities on issue on behalf of the Commonwealth

The National Debt Sinking Fund was established by the *National Debt Sinking Fund Act 1923–1959* and came into operation on 11 August 1923. Particulars of the creation and operation of sinking funds by that Act are included in issues of the Year Book prior to No. 23. The *National Debt Sinking Fund Act 1966* repealed all previous legislation on sinking funds relating to securities on issue on behalf of the Commonwealth. Under the Act of 1966 the period of redemption is 25 years from 1 July 1966 for debt outstanding at 30 June 1966 and 25 years for net debt created in subsequent years.

Broadly, the amounts payable to the National Debt Sinking Fund each year are made up of contributions from the Consolidated Revenue Fund of the Commonwealth as follows:

- (a) an amount of \$30.94 million each year for a period of 25 years;
- (b) an amount equal to 4 per cent of the amount of net debt created (if any) in any year for a period of 25 years.

In addition, an amount equal to specified receipts by the Commonwealth in repayment of loans or advances made out of moneys in the Loan Fund will be paid to the Sinking Fund.

The amounts payable to the Fund in any year from Consolidated Revenue Fund are to be reduced by the following:

(a) the net income from investments in any year; and

(b) an amount equal to 4 per cent of the amount of the net reduction of debt in any year.

Particulars of receipts and expenditure of the Commonwealth Account for the years 1966-67 to 1970-71 are as follows.

**NATIONAL DEBT SINKING FUND: COMMONWEALTH ACCOUNT, 1966-67 TO 1970-71**  
(£'000)

	1966-67	1967-68	1968-69	1969-70	1970-71
<b>Receipts—</b>					
From Consolidated Revenue . . . . .	21,589	25,421	32,832	26,351	21,061
Loans and advances repaid . . . . .	12,684	13,772	14,909	84,069	272,483
War Service Homes money repaid . . . . .	(a)	(a)	(a)	(a)	(a)
Interest on investments . . . . .	9,351	7,665	5,502	3,786	2,968
<b>Total receipts . . . . .</b>	<b>43,624</b>	<b>46,859</b>	<b>53,243</b>	<b>114,206</b>	<b>296,512</b>
<b>Expenditure (net cost)—</b>					
Securities repurchased and redeemed in—					
Australia . . . . .	112,435	68,019	33,340	113,083	293,179
London . . . . .	9,905	5,983	693	21,386	1,230
New York(b) . . . . .	29,852	26,145	28,253	28,319	22,941
Canada . . . . .	131	122	28	83	90
Netherlands . . . . .	..	118	119	119	119
<b>Total expenditure . . . . .</b>	<b>152,324</b>	<b>100,386</b>	<b>62,434</b>	<b>162,990</b>	<b>317,558</b>
Balance at 30 June . . . . .	194,114	140,587	131,396	82,612	61,565
Face value of securities repurchased and redeemed in—					
Australia . . . . .	112,784	68,287	33,473	114,333	294,367
London . . . . .	10,340	6,043	876	21,678	1,436
New York(b) . . . . .	29,875	26,569	29,624	29,514	23,771
Canada . . . . .	134	135	32	108	101
Netherlands . . . . .	..	118	118	118	119
<b>Total face value . . . . .</b>	<b>153,133</b>	<b>101,151</b>	<b>64,123</b>	<b>165,751</b>	<b>319,794</b>

(a) In the years 1966-67 to 1970-71 principal repayments were credited to Consolidated Revenue Fund. (b) Includes instalment repayments of loans from International Bank for Reconstruction and Development: 1966-67—face value, \$19.9m, net cost, \$20.0m; 1967-68—face value, \$20.8m, net cost, \$20.2m; 1968-69—face value, \$21.8m, net cost, \$21.1m; 1969-70—face value, \$17.6m, net cost, \$17.4m; 1970-71—face value, \$13.2m, net cost, \$13.1m.



**Securities on issue on behalf of States**

A sinking fund for the redemption of the securities on issue on behalf of States was established under the Financial Agreement. Particulars of the transactions of the National Debt Sinking Fund (States' Account) for each State during the year 1970-71 and for all States during the years 1966-67 to 1970-71 are shown in the following tables.

**NATIONAL DEBT SINKING FUND: STATES' ACCOUNT, 1970-71**

(\$'000)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
<b>Receipts—</b>							
Contributions under Financial Agreement—							
Commonwealth . . . . .	8,124	5,926	3,195	3,226	2,384	1,694	24,550
States . . . . .	29,989	22,254	11,364	11,665	9,628	5,263	90,162
Interest from States on cancelled securities . . . . .	60	37	21	16	18	10	162
Special contributions by States . . . . .	63	25	20	9	6	..	123
Interest on investments, etc. . . . .	10	27	12	10	5	6	70
<b>Total receipts . . . . .</b>	<b>38,246</b>	<b>28,269</b>	<b>14,612</b>	<b>14,926</b>	<b>12,041</b>	<b>6,973</b>	<b>115,067</b>
<b>Expenditure (net cost)—</b>							
Securities repurchased and redeemed in—							
Australia . . . . .	25,989	23,274	12,102	12,111	8,413	5,804	87,693
London . . . . .	4,089	2,324	725	969	2,248	469	10,824
New York . . . . .	4,569	2,629	1,580	1,387	882	794	11,841
Canada . . . . .	145	117	59	63	45	34	462
Netherlands . . . . .	173	139	71	70	54	40	547
<b>Total expenditure . . . . .</b>	<b>34,965</b>	<b>28,483</b>	<b>14,537</b>	<b>14,600</b>	<b>11,642</b>	<b>7,141</b>	<b>111,367</b>
<b>Balance at 30 June 1971 . . . . .</b>	<b>4,354</b>	<b>3,166</b>	<b>1,726</b>	<b>1,480</b>	<b>582</b>	<b>555</b>	<b>11,862</b>
<b>Face value of securities repurchased and redeemed in—</b>							
Australia . . . . .	25,997	23,278	12,102	12,112	8,413	5,804	87,705
London(a) . . . . .	4,199	2,490	770	1,020	2,439	520	11,438
New York(a) . . . . .	2,337	1,320	804	693	441	400	5,995
Canada(a) . . . . .	77	62	31	33	24	18	245
Netherlands(a) . . . . .	114	92	47	46	36	27	362
<b>Total face value . . . . .</b>	<b>32,724</b>	<b>27,242</b>	<b>13,754</b>	<b>13,905</b>	<b>11,352</b>	<b>6,768</b>	<b>105,745</b>

(a) Converted in accordance with the Financial Agreement at the equivalent of the mint par of exchange prevailing on 1 July 1927.

**NATIONAL DEBT SINKING FUND: STATES' ACCOUNT, 1966-67 TO 1970-71**  
(£'000)

	1966-67	1967-68	1968-69	1969-70	1970-71
<b>Receipts—</b>					
Contributions under Financial Agreement—					
Commonwealth . . . . .	18,951	20,387	21,619	23,271	24,550
States . . . . .	68,867	73,486	78,807	83,484	90,162
Interest from States on cancelled securities . . . . .	113	93	126	173	162
Special contributions by States . . . . .	220	143	138	138	123
Interest on investments, etc. . . . .	-46	48	-220	828	70
<b>Total receipts . . . . .</b>	<b>88,105</b>	<b>94,157</b>	<b>100,469</b>	<b>107,895</b>	<b>115,067</b>
<b>Expenditure (net cost)—</b>					
Securities repurchased and redeemed in—					
Australia . . . . .	59,451	50,568	45,120	81,284	87,693
London . . . . .	16,545	31,815	12,333	40,526	10,824
New York . . . . .	10,441	11,330	11,126	10,584	11,841
Canada . . . . .	680	631	145	433	462
Netherlands . . . . .	..	543	546	545	547
<b>Total expenditure . . . . .</b>	<b>87,118</b>	<b>94,886</b>	<b>69,270</b>	<b>133,372</b>	<b>111,367</b>
Balance at 30 June . . . . .	3,169	2,440	33,639	8,162	11,862
<b>Face value of securities repurchased and redeemed in—</b>					
Australia . . . . .	59,496	50,586	45,127	81,367	87,705
London(a) . . . . .	13,579	28,953	13,543	40,565	11,438
New York(a) . . . . .	4,925	5,629	12,318	5,582	5,995
Canada(a) . . . . .	344	348	167	266	245
Netherlands(a) . . . . .	..	677	540	362	362
<b>Total face value . . . . .</b>	<b>78,345</b>	<b>86,193</b>	<b>71,695</b>	<b>128,142</b>	<b>105,745</b>

(a) Converted in accordance with the Financial Agreement at the equivalent of the mint par of exchange prevailing on 1 July 1927.

### State and Local Authorities' Indebtedness

The statistics of indebtedness of State and local authorities set out in the two following tables have been compiled from returns supplied by all local authorities (including New South Wales County Councils), and by autonomous and semi-autonomous State authorities which have independent borrowing powers, i.e. the power to borrow other than by having Commonwealth securities issued on their behalf—and which have in fact exercised these powers in borrowing from the public under the provisions of the Loan Council's 'Gentleman's Agreement'.

The State authorities covered by these statistics include the authorities responsible for providing the following services.

*New South Wales.* Water Supply, Sewerage and Drainage, Electricity and Gas Supply, Fire Brigades, Banking, Housing, Harbours, Grain Elevators, Roads and Bridges, Marketing, Industry Assistance, and Miscellaneous.

*Victoria.* Water Supply and Sewerage, Irrigation and Drainage, Harbours, Transport, Electricity and Gas Supply, Roads and Bridges, Fire Brigades, Marketing (Buying and Selling), Industry Assistance, Grain Elevators, and Housing.

*Queensland.* Water Supply and Sewerage, Irrigation and Drainage, Harbours, Transport, Electricity Supply, Fire Brigades, University, Hospitals and Ambulances, Marketing (Buying and Selling and Agency), and Industry Assistance.

*South Australia.* Irrigation and Drainage, Transport, Electricity Supply, Fire Brigades, Hospitals and Ambulances, Marketing (Agency), Industry Assistance, Banking, Housing, University and Miscellaneous.

*Western Australia.* Water Supply and Sewerage, Harbours, Transport, Electricity Supply, Fire Brigades, Hospitals, Marketing (Agency), Housing, University, and Miscellaneous.

*Tasmania.* Harbours, Electricity Supply, Fire Brigades, Transport, Housing, Industry Assistance and Water Supply.

In the tables which follow, debt includes all liabilities for which arrangements have been made for repayment over a period of one year or more, and net overdrafts. Interest capitalised and amounts due for the capital cost of assets or for services rendered which are to be repaid over a period of one year or more are included. Current liabilities, such as interest accrued (but not capitalised), trade creditors, amounts held in trust, and other debts which are to be repaid in less than one year are not included. Net overdraft is the gross overdraft of all funds less all bank credit balances (including fixed deposits) which do not form part of a sinking fund to repay a loan. New loans raised during the year include new loan liabilities incurred during the year, loans raised from the public to repay indebtedness to the Government, and interest capitalised. Loans raised and redeemed within the year, increases in overdrafts, and loans raised for conversion or redemption of existing debt are excluded. Funds provided for redemption include instalments of principal repaid and amounts credited to sinking funds established for the purpose of repaying the debt on maturity. Amounts provided for redemption from loans raised for that purpose are excluded.

STATE AND LOCAL AUTHORITIES: NEW MONEY LOAN RAISINGS, REDEMPTION AND DEBT  
1965-66 TO 1969-70  
(\$ million)

	1965-66	1966-67	1967-68	1968-69	1969-70
STATE AUTHORITIES					
New money loan raisings—					
From government . . . . .	142.4	143.1	164.3	180.2	184.3
From public . . . . .	194.6	221.4	246.5	293.6	273.5
Total loan raisings . . . . .	337.0	364.5	410.8	473.8	457.9
Funds provided for redemption—					
Government loans . . . . .	24.0	25.5	28.1	28.4	31.1
Loans due to public . . . . .	42.6	43.1	63.3	66.0	67.5
Total funds for redemption . . . . .	66.6	68.5	91.4	94.4	98.6
Accumulated sinking fund balance . . . . .	160.1	178.6	196.5	214.8	233.3
Debt—					
Due to government . . . . .	2,083.2	2,217.5	2,353.6	2,505.8	2,659.6
Due to banks (net overdraft) . . . . .	0.7	7.5	7.0	9.4	9.0
Due to public(a) . . . . .	2,477.3	2,677.0	2,878.5	3,130.2	3,356.2
Total debt . . . . .	4,561.1	4,901.9	5,239.1	5,645.4	6,024.9
of which—					
Maturing overseas(a) . . . . .	12.9	11.8	5.8	1.6	..
LOCAL AUTHORITIES					
New money loan raisings—					
From government . . . . .	6.4	5.2	5.6	8.6	8.2
From public . . . . .	136.1	157.6	178.4	184.3	179.5
Total loan raisings . . . . .	142.6	162.8	184.0	192.9	187.7
Funds provided for redemption—					
Government loans . . . . .	4.3	3.9	3.7	3.5	3.4
Loans due to public . . . . .	59.2	66.6	71.9	79.0	85.4
Total funds for redemption . . . . .	63.5	70.5	75.6	82.5	88.8
Accumulated sinking fund balance . . . . .	65.2	73.8	81.3	91.5	97.7
Debt—					
Due to government . . . . .	57.3	58.3	60.2	65.0	69.9
Due to banks (net overdraft) . . . . .	7.1	9.2	4.3	4.8	3.8
Due to public(a) . . . . .	1,118.9	1,215.4	1,328.0	1,443.2	1,545.2
Total debt . . . . .	1,183.4	1,282.9	1,392.5	1,513.0	1,618.8
of which—					
Maturing overseas(a) . . . . .	9.7	4.3	3.6	3.2	2.8

(a) Includes debt payable in London and New York, converted to Australian currency equivalent at the I.M.F. rates of exchange applying as at 30 June in each of the years shown.

**STATE AND LOCAL AUTHORITIES: NEW MONEY LOAN RAISINGS, REDEMPTION  
DEBT AND INTEREST PAYABLE, 1969-70**  
(\$ million)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
STATE AUTHORITIES							
New money loan raisings—							
From government . . . .	34.3	55.0	4.9	29.6	25.3	35.2	184.3
From public . . . . .	72.3	117.0	38.5	20.3	15.9	9.6	273.5
<b>Total loan raisings . . . .</b>	<b>106.6</b>	<b>172.0</b>	<b>43.4</b>	<b>49.8</b>	<b>41.2</b>	<b>44.8</b>	<b>457.9</b>
Funds provided for redemption—							
Government loans . . . .	10.0	8.0	2.1	5.8	1.9	3.3	31.1
Loans due to public . . . .	18.6	31.2	12.0	1.1	2.9	1.7	67.5
<b>Total funds for redemption . . . .</b>	<b>28.6</b>	<b>39.2</b>	<b>14.2</b>	<b>6.8</b>	<b>4.8</b>	<b>5.1</b>	<b>98.6</b>
Accumulated sinking fund balance . . . .	136.9	62.7	21.0	..	7.1	5.6	233.3
Debt—							
Due to government . . . .	613.5	814.2	84.4	476.2	302.5	368.9	2,659.6
Due to banks (net overdraft) . . . .	2.8	0.9	0.5	0.1	4.7	..	9.0
Due to public creditor(a) . . . .	813.3	1,754.1	376.2	201.4	133.7	77.4	3,356.2
<b>Total debt(a) . . . . .</b>	<b>1,429.6</b>	<b>2,569.2</b>	<b>461.1</b>	<b>677.7</b>	<b>440.9</b>	<b>446.3</b>	<b>6,024.9</b>
<i>of which—</i>							
Maturing overseas(a) . . . .	75.1	133.4	25.4	33.7	21.2	22.6	311.4
Annual interest payable(a) . . . .	..	..	..	..	..	..	..
LOCAL AUTHORITIES							
New money loan raisings—							
From government . . . . .	0.2	0.2	7.2	0.5	..	..	8.2
From public . . . . .	81.0	26.7	41.5	9.4	14.1	6.8	179.5
<b>Total loan raisings . . . . .</b>	<b>81.3</b>	<b>26.9</b>	<b>48.6</b>	<b>9.9</b>	<b>14.2</b>	<b>6.8</b>	<b>187.7</b>
Funds provided for redemption—							
Government loans . . . . .	0.6	0.2	1.8	0.8	..	..	3.4
Loans due to public . . . . .	37.8	15.4	20.2	2.5	5.9	3.6	85.4
<b>Total funds for redemption . . . .</b>	<b>38.4</b>	<b>15.6</b>	<b>21.9</b>	<b>3.3</b>	<b>5.9</b>	<b>3.7</b>	<b>88.8</b>
Accumulated sinking fund balance . . . .	46.5	14.6	34.4	0.2	..	1.9	97.7
Debt—							
Due to government . . . . .	6.7	7.7	47.9	6.6	..	0.9	69.9
Due to banks (net overdraft) . . . .	2.4	1.2	..	0.1	..	..	3.8
Due to public creditor(a) . . . .	716.0	225.5	403.7	54.3	74.8	70.9	1,545.2
<b>Total debt(a) . . . . .</b>	<b>725.1</b>	<b>234.4</b>	<b>451.6</b>	<b>61.0</b>	<b>74.9</b>	<b>71.9</b>	<b>1,618.8</b>
<i>of which—</i>							
Maturing overseas(a) . . . .	75.1	13.2	2.8	..	..	..	2.8
Annual interest payable(a) . . . .	..	..	25.3	3.4	4.3	4.1	89.4

(a) Includes debt or interest payable in London and New York, converted to Australian currency equivalent at the I.M.F. rates of exchange applying as at 30 June 1970.

### Aggregate debt of State and local authorities

The following table brings together figures of Commonwealth securities on issue on account of the States, debt outstanding of State authorities which have borrowed directly, and debt outstanding of local authorities, to provide an indication of the level of indebtedness of the public authorities in each State. It should be noted, however, that for the kinds of reasons outlined on page 591, this aggregation of figures for securities on issue and debt outstanding cannot be taken as a measure of the 'net public debt' of the State and local authorities. In order to measure this latter magnitude it would be necessary to identify and deduct the substantial holdings of Commonwealth, State and local securities which represent the investment by these authorities of reserve funds and trust and other funds which they administer. In addition, it would be necessary to include the indebtedness of the State authorities to the Commonwealth in respect of advances made for specific capital purposes (such as those made under the Commonwealth-State Housing Agreements). For some purposes too it might be necessary to identify and deduct any loans outstanding from governments to other sectors.



## STATE AND LOCAL AUTHORITIES' INDEBTEDNESS, 30 JUNE 1966 TO 1970

<i>State authorities</i>				
<i>Commonwealth securities issued on account of States</i>		<i>State authorities' own borrowings(a)</i>	<i>Local authorities(a)</i>	<i>Total</i>
AMOUNT OUTSTANDING (\$ million)(b)				
30 June 1970—				
New South Wales . . . . .	3,078.7	816.1	718.5	4,613.3
Victoria . . . . .	2,254.4	1,755.0	226.7	4,236.1
Queensland . . . . .	1,236.0	376.8	403.7	2,016.4
South Australia . . . . .	1,211.3	201.5	54.4	1,467.2
Western Australia . . . . .	896.0	138.4	74.8	1,109.2
Tasmania . . . . .	643.8	77.4	70.9	792.1
<b>All States, 30 June 1970</b> . . . . .	<b>9,320.1</b>	<b>3,365.2</b>	<b>1,548.9</b>	<b>14,234.3</b>
1969 . . . . .	8,830.5	3,139.6	1,447.9	13,418.0
1968 . . . . .	8,316.5	2,885.5	1,332.3	12,534.4
1967 . . . . .	7,934.1	2,684.5	1,224.6	11,843.2
1966 . . . . .	7,494.6	2,477.9	1,126.0	11,098.6
PER HEAD OF POPULATION (\$)(b)				
30 June 1970—				
New South Wales . . . . .	686.9	182.1	160.3	1,029.3
Victoria . . . . .	659.9	513.7	66.4	1,240.1
Queensland . . . . .	695.4	212.0	227.1	1,134.5
South Australia . . . . .	1,054.7	175.5	47.4	1,277.5
Western Australia . . . . .	920.9	142.3	76.9	1,140.1
Tasmania . . . . .	1,666.7	200.3	183.6	2,050.6
<b>All States, 30 June 1970</b> . . . . .	<b>765.0</b>	<b>276.2</b>	<b>127.1</b>	<b>1,168.4</b>
1969 . . . . .	739.4	262.9	121.2	1,123.5
1968 . . . . .	709.0	246.0	113.6	1,068.6
1967 . . . . .	687.4	232.6	106.1	1,026.1
1966 . . . . .	660.2	218.3	99.2	977.6

(a) Amounts due to central government have been excluded.

(b) Debts repayable overseas have been converted to the Australian currency equivalent.

## ROADS AND BRIDGES: WATER SUPPLY AND SEWERAGE: HARBOURS

As indicated elsewhere in this chapter, further details of the activities of public authorities engaged in particular fields of activity such as defence, transport and communication, health and welfare, education, electricity supply, banking, etc., may be found in other chapters of this Year Book which deal specifically with those subjects. However it has been convenient for the time being to include in this chapter an account of the activities of authorities engaged in the fields of construction and maintenance of roads and bridges, provision of water supply and sewerage services and provision of harbour facilities. Particular attention is given to the activities of State authorities engaged in these fields.

## Roads and Bridges

Primary responsibility for the construction and maintenance of roads and bridges rests with State and local authorities. In each State there exists a central road authority or a government department which undertakes construction, reconstruction and maintenance of declared 'main' and 'developmental' roads, and which administers the distribution of funds to local authorities and supervises and co-ordinates road construction throughout the State. Provision of roads and bridges has always been one of the principal functions of local authorities, and these authorities still account for a significant proportion of construction and maintenance activity, as is shown by figures given earlier

in this chapter. However the relative importance of the contribution of local authorities has tended to decline in recent years, reflecting in part a reassessment of priorities in allocations of road finance. The Commonwealth Government is concerned with construction and maintenance of roads and bridges in the Northern Territory and Australian Capital Territory and roads of access to Commonwealth property in the various States; but the Commonwealth's most significant contribution to government activity in this field is in the provision of specific purpose capital grants to the States under the Commonwealth Aid Road Acts, which constituted about 32 per cent of the total outlay by State and local authorities on roads and bridges in 1969-70.

In what follows, figures are provided of expenditure on roads and bridges by all public authorities, Commonwealth grants for road purposes, and an account is given of the activities of the principal State authorities concerned with roads and bridges in each State. For details of mileages of roads open to traffic, classified according to class of road and road surface, see Chapter 12, Transport, Communication and Travel.

#### All public authorities

The figures given in the following table provide an approximate measure of the aggregate net expenditure on roads and bridges by Commonwealth, State and local authorities in recent years. Expenditure on roads by those authorities whose primary activity is directed towards functions other than roads, e.g. electricity, forestry, housing, etc., is not included. The figures cover expenditure on the construction, reconstruction and maintenance of roads and bridges, and direct administration. Debt charges are not normally classified by function and are therefore excluded. Because a satisfactory and consistent distinction between new construction and maintenance cannot be made with existing data, all expenditure on roads and bridges is treated as capital expenditure.

#### ALL PUBLIC AUTHORITIES: GROSS FIXED CAPITAL EXPENDITURE, ROADS AND BRIDGES, 1966-67 TO 1970-71 (\$ million)

Year	Commonwealth authorities	State and local authorities					Tas.	All public authorities
		N.S.W.	Vic.	Qld	S.A.	W.A.		
1966-67	13	168	131	81	47	48	19	507
1967-68	18	174	145	91	47	49	18	543
1968-69	23	189	160	93	49	51	18	584
1969-70	23	201	172	106	57	56	19	634
1970-71(a)	31	227	188	110	58	61	21	696

(a) Estimated.

#### Commonwealth grants

The following table shows the allocations to the States under the several Commonwealth Aid Roads Acts for road construction, maintenance, repair and other works connected with transport for each of the years 1966-67 to 1970-71. After 1 July 1959, when the *Commonwealth Aid Roads Act* 1959 came into operation, the Commonwealth made separate provision for expenditure on strategic roads and the promotion of road safety practices.

#### ROAD CONSTRUCTION, MAINTENANCE, ETC.: GRANTS UNDER THE COMMONWEALTH AID ROADS ACTS, STATES, 1966-67 TO 1970-71 (\$'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
1966-67	41,744	29,443	27,415	17,222	26,676	7,500	150,000
1967-68	44,467	31,286	29,266	18,384	28,597	8,000	160,000
1968-69	47,319	33,113	31,098	19,433	30,537	8,500	170,000
1969-70	57,060	38,160	34,740	21,000	32,940	9,100	193,000
1970-71	64,980	43,460	39,560	23,500	36,270	10,230	218,000

#### New South Wales

Main roads administration is organised as a separate department under the control of a Commissioner. The activities of the Department of Main Roads include works on main, secondary, developmental and tourist roads throughout the State, all roads in the unincorporated portion of the Western Division, and certain associated works, principally bridges and vehicular ferries, constructed and maintained from government funds. The Department of Main Roads co-operates with the municipal and shire councils in the work of constructing and maintaining the main roads system.

In the County of Cumberland, which for the purposes of the Main Roads Act is deemed to include the City of Blue Mountains and small sections of other councils' areas on the boundary of the County of Cumberland, the full cost of main road and bridge construction, half the cost of secondary roads, and a proportion (in general, up to half) of the cost of tourist roads are met from the funds of the Department of Main Roads. The Councils do not contribute directly to the cost of these works but are required to pay a levy on the unimproved capital value of rateable property within Council's area or a uniform percentage determined annually by the Commissioner of Council's total rate income, whichever is the lesser. In the former case the rate payable in respect of lands used principally for primary production is half the rate levied on other lands.

In country districts the Department meets the full cost of road and bridge works on State highways, the full cost of bridge construction works and three-quarters of the cost of road construction and road and bridge maintenance works on trunk roads, three-quarters of the cost of bridge construction works and two-thirds of the cost of road construction and road and bridge maintenance works on ordinary main roads, and, in most cases, up to half the cost of works on tourist roads. The cost of constructing developmental roads and works is borne in full by the Department of Main Roads, but local Councils are required to maintain them in a satisfactory condition.

The funds of the Department of Main Roads are derived principally from motor vehicle taxation, charges on heavy commercial goods vehicles under the Road Maintenance (Contribution) Act, 1958-1969, grants under Commonwealth Aid Roads Acts (see page 606), other grants from the State or Commonwealth Governments, and proceeds of a levy on municipal and shire councils in the County of Cumberland in accordance with the Main Roads Act, 1924. The State Government also makes repayable advances for Main Roads Department works, and since 1963 the Commissioner for Main Roads has had the power (with the approval of the Governor on the recommendation of the Treasurer) to borrow moneys. The figures shown below represent the aggregate revenue and expenditure of five funds: the County of Cumberland Main Roads General and Special Purposes Funds, the Country Main Roads General and Special Purposes Funds, and the Developmental Roads Fund.

**DEPARTMENT OF MAIN ROADS, NEW SOUTH WALES: REVENUE  
AND EXPENDITURE, 1966-67 TO 1970-71**

(\$'000)

	1966-67	1967-68	1968-69	1969-70	1970-71
REVENUE(a)					
Motor vehicle taxation, registration and licence fees . . . . .	42,897	45,248	49,636	52,519	55,237
Commonwealth Aid Roads Acts . . . . .	26,313	28,013	29,814	40,207	47,279
State and Commonwealth grants . . . . .	63	..	..	..	2,400
Contributions by other departments and bodies . . . . .	893	516	350	1,194	1,154
Local authorities' contributions—					
Under section 11 of Mains Roads Act . . . . .	7,600	8,241	7,538	9,820	11,407
Other . . . . .	250	385	262	30	275
Sydney-Newcastle Expressway Toll . . . . .	706	892	1,530	2,096	2,271
Other . . . . .	564	652	859	776	1,047
<b>Total . . . . .</b>	<b>79,286</b>	<b>83,947</b>	<b>89,989</b>	<b>106,642</b>	<b>121,070</b>
EXPENDITURE(b)					
Roads and bridges—					
Construction . . . . .	62,590	64,534	67,950	79,999	92,154
Maintenance . . . . .	17,677	17,352	19,719	22,114	22,661
Administration . . . . .	4,296	4,816	5,379	6,133	7,371
Interest, exchange, etc., on debt . . . . .	1,856	2,094	2,541	3,126	3,802
Other(c) . . . . .	1,753	1,705	2,229	3,185	3,294
<b>Total . . . . .</b>	<b>88,172</b>	<b>90,501</b>	<b>97,819</b>	<b>114,555</b>	<b>129,283</b>

(a) Excludes repayable advances by the State Government and private loans (\$6,500,000 in 1966-67, \$8,750,000 in 1967-68, \$12,900,000 in 1968-69, \$10,600,000 in 1969-70, and \$11,250,000 in 1970-71), and transfers from Sydney Harbour Bridge Account for Expressway construction (\$3,743,000 in 1966-67, \$4,775,000 in 1967-68, \$900,000 in 1968-69, \$224,000 in 1969-70, and \$70,000 in 1970-71). Expenditure from these amounts is fully reflected in Expenditure. (b) Excludes debt redemption (\$346,000 in 1966-67, \$477,000 in 1967-68, \$812,000 in 1968-69, \$984,000 in 1969-70, and \$1,365,000 in 1970-71) and repayment of government advances (\$200,000 in 1966-67 and later years). (c) Mainly purchase of assets not subject to annual depreciation charge. The purchase of other assets is omitted here because the depreciation charge for them is reflected each year in 'Roads and bridges'.



Toll facilities operated by the Department of Main Roads include the Sydney Harbour Bridge and completed sections of the Sydney-Newcastle Expressway.

The Sydney Harbour Bridge was opened for traffic on 19 March 1932, and has a main span of 1,650 feet with clearance for shipping of 170 feet. The deck, 160 feet wide, carries eight road traffic lanes, two railway tracks, one cycleway and one footway. During 1970-71, approximately 48.3 million private road vehicles, 27.3 million rail passengers and 11.7 million bus passengers crossed the bridge. Income from tolls during 1970-71 amounted to \$4,845,000, including road tolls of \$4,519,000, rail passenger tolls \$300,000 and bus passenger tolls \$26,000.

The sections of the Sydney-Newcastle Expressway now open to traffic extend approximately six miles between Berowra and the Hawkesbury River and approximately ten miles north of the river to Calga. The Department is currently constructing a bridge on the Hawkesbury River to link these two sections of the Expressway. Total cost of the project to 30 June 1971 was \$30.4 million. Toll collections during the year ended 30 June 1971 amounted to \$2,271,354.

### Victoria

With the object of improving the main roads of the State, the Country Roads Board was established by legislation passed in 1912. The principal duties of the Board are to determine which roads should be declared in the various classifications; to supervise the construction, reconstruction and maintenance of these roads; to inquire into the State's resources in road materials and the most effective methods of road construction and maintenance; and to recommend deviations in existing roads or the construction of new roads in order to facilitate communications or to improve the conditions of traffic.

The funds of the Country Roads Board are derived principally from motor registration fees, two-thirds of additional registration fees (charged on initial registration or transfer), a proportion of drivers' licence fees, payments by the Commonwealth Government under the Commonwealth Aid Roads Acts, roads charges under the Commercial Goods Vehicles Act, repayments by municipalities and, since 1965, a share of the addition to registration fees paid to the Roads (Special Projects) Fund and a grant under the Public Works Loan Application Act. In addition, loans have been authorised from time to time under the Country Roads Acts for permanent works on main and developmental roads, State highways, tourists' roads and forest roads, while the State Government has provided, free of repayment, loan moneys for restoration of flood and bush fire damage. Finance for the elimination of level crossings and for improved approaches, signs, lighting and other work to reduce danger at level crossings is derived mainly from the one third of additional registration fees paid into the Level Crossings Fund, maintained by the Board.

#### COUNTRY ROADS BOARD, VICTORIA: RECEIPTS AND PAYMENTS 1966-67 TO 1970-71 (\$'000)

	1966-67	1967-68	1968-69	1969-70	1970-71
RECEIPTS					
Motor Car Act—registration and licence fees (less cost of collection) . . . .	25,871	26,805	28,889	30,868	32,895
Municipalities' payments . . . . .	1,824	1,845	1,931	1,904	2,018
Commonwealth Aid Roads Acts . . . .	29,050	30,895	32,723	38,160	41,425
Roads (Special Projects) Fund . . . . .	3,311	2,652	3,055	3,533	7,761
Road charges, Commercial Goods Vehicles Act . . . . .	6,732	7,248	7,842	8,555	8,903
Loans from State Government . . . . .	834	987	3,389	900	388
Grants from State Government . . . .	715	700	784	849	783
Other . . . . .	459	380	520	498	543
<b>Total . . . . .</b>	<b>68,796</b>	<b>71,513</b>	<b>79,132</b>	<b>85,267</b>	<b>94,715</b>



COUNTRY ROADS BOARD, VICTORIA: RECEIPTS AND PAYMENTS  
1966-67 TO 1970-71—*continued*  
(\$'000)

	1966-67	1967-68	1968-69	1969-70	1970-71
PAYMENTS					
Construction and maintenance of roads and bridges—					
State highways . . . . .	19,674	19,003	18,349	22,078	20,465
Main roads . . . . .	16,765	16,769	16,940	17,783	19,373
Freeways . . . . .	5,172	7,969	11,682	13,439	18,869
Tourist roads . . . . .	2,312	2,857	2,793	3,112	2,665
Forest roads . . . . .	737	658	678	798	902
Unclassified roads . . . . .	12,798	13,739	14,248	16,356	17,217
Other . . . . .	45	82	86	112	69
Plant purchase . . . . .	1,388	1,234	1,583	1,818	1,956
Buildings, workshops, etc. . . . .	165	746	611	618	599
Interest, debt redemption, etc. . . . .	2,140	2,190	2,306	2,443	2,504
Statutory payment to—					
Tourist Fund . . . . .	494	517	536	578	617
Transport Regulation Board . . . . .	383	404	435	471	513
Administration and other . . . . .	5,502	6,274	7,205	7,509	10,089
<b>Total . . . . .</b>	<b>67,575</b>	<b>72,443</b>	<b>77,452</b>	<b>87,115</b>	<b>95,838</b>

The Melbourne and Metropolitan Board of Works bears the responsibility for carrying-out planning scheme proposals relating to metropolitan highways and bridges, and is now carrying out a programme of urgent highway works throughout the metropolitan area of Melbourne. The extension of the South-Eastern Freeway from Burnley to Tooronga and the Tullamarine Freeway to serve the new Tullamarine airport have now been completed. Expenditure on road projects up to 30 June 1971 was \$60.3 million. Of this amount, \$22.6 million was financed from the proceeds of the Board's Metropolitan Improvement Rate, \$37.7 million was contributed by the Treasurer of Victoria from the Roads (Special Projects) Fund and \$0.4 million from the Commonwealth Aid Roads Account during 1970-71.

The Lower Yarra Crossing Authority was incorporated in October 1965 as a company limited by guarantee and given powers under the *Lower Yarra Crossing Authority Act 1965* to construct, operate and maintain a toll crossing over the lower reaches of the River Yarra.

### Queensland

The Department of Main Roads was constituted in February 1951 with the Commissioner of Main Roads as its permanent head. The duties of the Commissioner are to carry out surveys and investigations necessary to determine State highways, main developmental, and secondary roads; and the responsibility for building and maintaining these declared roads is largely that of the Commissioner. Roads of purely local importance are constructed and maintained by local authorities. In many cases construction is financed by the State Government by means of Treasury loans. Other roads may be built by the Public Estate Improvement Branch of the Lands Department in order to open up areas of previously inaccessible or undeveloped country.

The funds of the Department of Main Roads are obtained chiefly from motor vehicle registration and collections, fees, etc., under the Transport Acts, contributions under the Commonwealth Aid Roads Acts, and loans, grants and advances from the State Government. The total receipts and payments during each of the years 1966-67 to 1970-71 are shown in the following table.

**DEPARTMENT OF MAIN ROADS, QUEENSLAND: RECEIPTS AND PAYMENTS**  
**1966-67 TO 1970-71**  
 (\$'000)

	1966-67	1967-68	1968-69	1969-70	1970-71
<b>RECEIPTS</b>					
Motor vehicle registration, Transport Acts collections, fees, etc. . . . .	18,645	20,664	22,048	23,454	25,000
Loans from State Government . . . . .	1,117	1,717	2,330	400	50
Grants from State Government . . . . .	50	120	746	550	378
Roads (Contribution to Maintenance) Act . . . . .	3,592	3,918	4,297	4,754	4,689
Commonwealth Aid Roads and Works Act . . . . .	31,707	33,075	35,296	40,021	47,285
Maintenance repayments—local authorities . . . . .	1,192	1,400	1,471	1,515	1,116
Hire, rent, sales of plant, etc. . . . .	5,770	5,669	5,853	6,465	6,074
Other . . . . .	650	802	649	601	773
<b>Total . . . . .</b>	<b>62,722</b>	<b>67,366</b>	<b>72,689</b>	<b>77,761</b>	<b>85,366</b>
<b>PAYMENTS</b>					
Permanent road works and surveys(a) . . . . .	39,305	44,899	46,799	53,035	56,802
Maintenance of roads . . . . .	8,310	9,095	8,929	10,150	10,911
Plant, machinery, buildings, etc. (including plant maintenance) . . . . .	3,367	3,656	4,060	4,496	3,348
Loans—					
Interest . . . . .	301	338	276	236	59
Redemption . . . . .	396	954	934	925	895
Administration and other . . . . .	8,089	9,497	10,194	11,697	12,870
<b>Total . . . . .</b>	<b>59,768</b>	<b>68,439</b>	<b>71,193</b>	<b>80,538</b>	<b>84,883</b>

(a) Includes grants to local authorities for road purposes.

### South Australia

The Highways Department is administered by the Commissioner of Highways, who is empowered, subject to the approval of the Minister of Roads and Transport, to undertake the construction, maintenance and protection of the principal roads of the State, allocate grants to councils for road-works and supervise the expenditure of these grants, and assist Councils to purchase road-making plant and to defray the cost of roadworks. In addition, the Commissioner advises Councils on technical questions concerning the construction, maintenance or repair of roads. Funds of the Department are derived mainly from the Highways Fund, into which are paid the proceeds from motor vehicle registration and drivers' licences (less cost of collection) appropriations from loan funds, repayments of advances made to Councils, and contributions by the Municipal Tramways Trust, and from contributions under the Commonwealth Aid Roads Acts.

The following table shows particulars of receipts and payments, during the years 1966-67 to 1970-71, of funds controlled by the Highways Department.

**HIGHWAYS DEPARTMENT, SOUTH AUSTRALIA**  
**RECEIPTS AND PAYMENTS, 1966-67 TO 1970-71**  
(\\$'000)

	1966-67	1967-68	1968-69	1969-70	1970-71
RECEIPTS					
Motor vehicle registration, licences, fees . . . . .	11,506	11,858	12,536	13,250	14,212
Commonwealth Aid Roads Acts . . . . .	17,223	18,384	19,433	21,000	23,500
Other(a) . . . . .	3,496	3,693	3,799	5,161	4,022
<b>Total . . . . .</b>	<b>32,225</b>	<b>33,934</b>	<b>35,767</b>	<b>39,412</b>	<b>41,733</b>
PAYMENTS					
Construction and reconstruction of roads and bridges(b) . . . . .	22,834	20,799	23,837	30,200	27,056
Maintenance(a)(b) . . . . .	6,000	7,128	8,211	10,271	11,575
Recoups to Consolidated Revenue Fund—interest, debt redemption and exchange . . . . .	514	518	522	544	556
Advances to local and semi-government authorities . . . . .	1,091	1,386	1,253	402	251
Repayments to Revenue under Section 31(a), Highways Act . . . . .	1,000	240	..	..	..
Stores, plant, machinery, suspense accounts, etc.(c) . . . . .	1,792	2,866	-105	581	859
<b>Total . . . . .</b>	<b>33,231</b>	<b>32,936</b>	<b>33,718</b>	<b>41,998</b>	<b>40,298</b>

(a) Includes reimbursement works for Commonwealth Government. (b) Includes administration expenses.  
(c) Represents gross repayments less recoveries by charges to works on account of depreciation and materials used.

### Western Australia

Work connected with road construction and maintenance and associated projects in Western Australia is undertaken by the State Government, through the Main Roads Department, and by local government authorities throughout the State. The Department operates under the *Main Roads Act*, 1930-1969, and is administered by a Commissioner of Main Roads responsible to the Minister for Works. The Act makes provision for the construction and maintenance of public roads in the categories of main roads, controlled-access roads and developmental roads. An additional category, that of important secondary roads, is used by the Department in determining its works programme. Within its own district each local government authority is responsible for the provision and upkeep of roads other than those provided by the Main Roads Department. In addition, the local authority is required by the Main Roads Act to maintain any developmental road situated in its district.

The funds of the Main Roads Department are derived principally from allocations made under the *Commonwealth Aid Roads Act* 1969 under which Western Australia has been allotted grants totalling \$200,400,000 for the five-year period commencing 1 July 1969. In the seven-year period to 30 June 1974 grants totalling a maximum of \$9,500,000 are to be received from the Commonwealth for the improvement of roads used for the transport of beef cattle in the Kimberley District. Other sources of income include a portion of vehicle licence fees collected by local government authorities and the Commissioner of Police, overload permit fees and an allocation from drivers' licence fees. Further moneys for expenditure on road maintenance are available under the *Road Maintenance (Contribution) Act*, 1965-1970 administered by the Commissioner of Transport. Since 1 July 1969 the Main Roads Department, through changes to legislation, has administered funds not previously included in receipts and payments of the Department. Receipts and payments for the years 1966-67 to 1970-71 are shown in the following table.

**MAIN ROADS DEPARTMENT, WESTERN AUSTRALIA: RECEIPTS AND  
PAYMENTS, 1966-67 TO 1970-71**  
(\$'000)

	1966-67	1967-68	1968-69	1969-70	1970-71
<b>RECEIPTS</b>					
Motor vehicle registration, licence fees, etc.—					
Police Department . . . . .	3,820	3,868	4,435	7,958	8,881
Local Authorities . . . . .	..	..	..	3,367	4,440
Commonwealth Aid Roads Acts . . . . .	23,475	24,307	25,148	32,940	36,270
Commonwealth Aid Roads Acts—Matching grants . . . . .	763	1,202	2,040	..	..
Western Australia Grant (Beef Cattle Roads) Act . . . . .	1,500	..	..	..	..
State Grants (Beef Cattle Roads) Act . . . . .	..	1,400	1,451	1,168	1,000
Road Maintenance (Contribution) Act . . . . .	2,619	3,100	3,086	3,557	4,131
Recoups from other authorities . . . . .	1,821	1,469	2,488	2,433	2,416
Other . . . . .	176	272	299	307	420
<b>Total . . . . .</b>	<b>34,173</b>	<b>35,618</b>	<b>38,946</b>	<b>51,730</b>	<b>57,558</b>
<b>PAYMENTS</b>					
Construction and reconstruction of roads and bridges(a) . . . . .	26,009	24,846	27,456	28,921	30,536
Maintenance of roads and bridges(a) . . . . .	3,010	3,294	4,452	4,820	5,815
Recoups to local authorities(b) . . . . .	3,518	4,307	..	..	..
Grants to local authorities . . . . .	..	..	..	10,997	13,315
Transfer to State Consolidated Revenue . . . . .	258	258	258	267	281
Plant, machinery, etc. . . . .	1,789	2,046	516	950	1,617
Other(a) . . . . .	1,678	1,642	3,760	3,809	5,053
<b>Total . . . . .</b>	<b>36,262</b>	<b>36,393</b>	<b>36,442</b>	<b>49,764</b>	<b>56,616</b>

(a) Includes administration and expenditure on hire and maintenance of road construction plant, etc., and on purchase of materials. (b) Consists of payments to local authorities for work carried out on behalf of the Main Roads Department. From 1968-69 these payments have been included in 'Construction and reconstruction of roads and bridges' and 'Maintenance of roads and bridges'.

### Tasmania

Under the *Roads and Jetties Act 1935*, the control of the construction and maintenance of roads and certain road making plant was vested in the Minister for Lands and Works. Works authorised by the Minister in respect of roads classified as State highways, main roads, secondary roads and tourist and developmental roads are constructed by the Department of Public Works and financed from the State Highways Trust Fund, into which are paid Commonwealth Aid Roads grants, motor vehicle taxes and public vehicle fees. Loan funds are also authorised by Parliament for road purposes. Municipal councils contribute towards the cost of maintaining main and secondary roads in the classified system. The maintenance of roads not included in the classified system is the responsibility of municipal councils, but they are assisted with grants made available under the Commonwealth Aid Roads Act for expenditure on Rural Roads.

The table following shows particulars of the receipts and payments of the combined Road Funds for the years 1966-67 to 1970-71 (municipal council receipts from rates and loans for road purposes are excluded).



**ROAD FUNDS; TASMANIA: RECEIPTS AND PAYMENTS 1966-67 TO 1970-71**  
(\\$'000)

	1966-67	1967-68	1968-69	1969-70	1970-71
RECEIPTS					
Motor vehicle taxation, registration, licences, fees, fines, etc. . . . .	3,961	4,396	4,587	4,827	5,033
Commonwealth Aid Roads Acts . . . . .	7,500	8,000	8,500	9,100	10,230
State Loan Fund . . . . .	1,693	1,188	739	1,100	1,020
Contributions by Local Authorities . . . . .	19	18	17	18	17
Other . . . . .	176	438	102	128	93
<b>Total . . . . .</b>	<b>13,349</b>	<b>14,040</b>	<b>13,945</b>	<b>15,173</b>	<b>16,393</b>
PAYMENTS					
Construction and reconstruction of roads and bridges . . . . .	10,182	10,848	10,180	11,322	12,320
Maintenance of roads and bridges . . . . .	3,162	3,159	3,263	3,662	4,297
Planning and research . . . . .	..	..	..	120	185
<b>Total . . . . .</b>	<b>13,344</b>	<b>14,007</b>	<b>13,442</b>	<b>15,105</b>	<b>16,802</b>

### Water supply, sewerage and drainage

The information in this section relates primarily to the metropolitan areas and provincial cities and towns. For information on water supply and irrigation in rural areas *see* Chapter 23, *Water Conservation and Irrigation*.

#### New South Wales

The two largest domestic water supply and sewerage systems are controlled by statutory boards each consisting of a president and a vice-president appointed by the State Government, and five members elected by local councils. These are (a) the Metropolitan Water, Sewerage and Drainage Board, which administers the systems in the County of Cumberland, i.e. in Sydney and in the surrounding districts, and, in addition, has jurisdiction over territory extending along the South Coast beyond Wollongong to Lake Illawarra, Shellharbour and Kiama, and (b) the Hunter District Water Board serving the Newcastle-Maitland-Cessnock areas. At Broken Hill and Cobar similar boards include representatives of the mining companies. Other systems, apart from irrigation projects and water storage systems administered by the State Government, are controlled by county, municipal or shire councils.

*Metropolitan and Hunter District water supply.* The storage reservoirs of the *metropolitan water supply system* with a combined available capacity of 577,112 million gallons, drain catchment areas of 3,890 square miles (including Warragamba, 3,480 square miles, Upper Nepean, 347 square miles, and Woronora, 29 square miles). The development of a water supply system on the Warragamba River was completed with the official opening of the Warragamba Dam in October 1960. This dam, constructed in concrete, has a storage capacity of 452,505 million gallons. Its safe net draught is estimated to be 274 million gallons a day. At 30 June 1971 there were 186 service reservoirs in use with a combined capacity of 726 million gallons. Fluoridation of the metropolitan water supply commenced in April 1968.

The following table shows, for the Metropolitan system, the number of properties, the estimated population supplied, and other details.

**METROPOLITAN WATER SUPPLY<sup>(a)</sup>, NEW SOUTH WALES: SERVICES, 1966-67 TO 1970-71**

Year	Improved properties for which water mains available	Estimated population supplied	Average daily consumption	Total consumption for the year	Average daily consumption		Length of mains	Number of meters
					Per property	Per head of estimated population		
		'000	mil. gal	mil. gal	gallons	gallons	miles	
1966-67	735,360	2,756	234	85,383	318	85	8,105	515,653
1967-68	756,063	2,816	270	98,981	357	96	8,325	532,859
1968-69	775,548	2,885	302	110,347	389	106	8,534	550,017
1969-70	795,918	2,968	285	104,017	358	97	8,805	583,818
1970-71	817,655	3,042	293	106,860	358	97	8,973	608,851

(a) County of Cumberland, City of Greater Wollongong, Shellharbour and Kiama Municipalities, and parts of Colo and Wollondilly Shires.

The water supply of the *Hunter District* system is drawn principally from three sources; the Chichester Reservoir, with a storage capacity of about 3,742 million gallons and draining a catchment of 76 square miles, the Tomago Sandbeds, which extend northerly along the coast towards Port Stephens, and the Grahamstown Water Supply Scheme which is still being developed. Another source of supply is provided by the Nelson Bay-Anna Bay Scheme. Service reservoirs and tanks distributed throughout the water supply district have a total storage capacity of 138 million gallons.

*Metropolitan and Hunter District sewerage and drainage system.* The metropolitan sewerage and drainage system serving Sydney and suburbs comprises 4 major sewerage systems and 7 minor systems, consisting of 6 outfalls discharging directly into the Pacific Ocean and 5 treatment works. There are also 8 centres outside the metropolitan area of which 5 (Camden, Campbelltown, St Mary's, Richmond and Warragamba township) are served by local treatment works and 3 (Bellambi, Port Kembla and Wollongong) discharge directly into the Pacific Ocean. Stormwater drainage channels under the control of the Metropolitan Water, Sewerage and Drainage Board at 30 June 1971 were 191 miles long.

The following table gives details of sewerage services and stormwater drains of the Metropolitan system.

**METROPOLITAN SEWERAGE AND DRAINAGE<sup>(a)</sup>  
NEW SOUTH WALES: SERVICES, 1967 TO 1971**

30 June—	Improved properties for which sewerage available	Estimated population served	Length of sewers	Length of stormwater channels
		'000	miles	miles
1967 . . .	547,630	2,052	5,881	182
1968 . . .	574,847	2,135	6,166	184
1969 . . .	602,312	2,235	6,504	186
1970 . . .	637,258	2,374	6,804	190
1971 . . .	659,035	2,477	7,109	191

(a) County of Cumberland, City of Greater Wollongong, Shellharbour and Kiama Municipalities, and parts of Colo and Wollondilly Shires.

The main sewerage system of the *Hunter District* serves the City of Newcastle and discharges into the Pacific Ocean at Burwood Beach. There are also local treatment works at Maitland, Cessnock and some of the outlying districts.

*Metropolitan system finances.* The following table shows the debt, revenue and expenditure of the Metropolitan Water, Sewerage and Drainage Board for each of the services of water supply, sewerage and drainage during 1970-71, and for the three services combined for the years 1966-67 to 1970-71.

**METROPOLITAN(a) WATER SUPPLY, SEWERAGE AND DRAINAGE  
NEW SOUTH WALES: FINANCES, 1966-67 TO 1970-71  
(\$'000)**

Year	Capital debt at 30 June	Revenue	Expenditure			Total	Surplus
			Working expenses (b)	Interest and exchange	Debt redemp- tion		
1970-71—							
Water . . .	336,145	51,815	28,003	17,486	6,323	51,812	3
Sewerage . . .	302,532	43,314	22,718	14,964	5,628	43,310	4
Drainage . . .	15,742	2,565	1,568	809	184	2,561	4
Total—							
1970-71 . . .	654,420	97,694	52,289	33,259	12,135	97,683	11
1969-70 . . .	627,475	88,343	47,112	30,213	11,004	88,328	15
1968-69 . . .	590,869	80,206	41,865	28,216	10,105	80,185	21
1967-68 . . .	550,793	68,917	31,765	26,389	10,754	68,908	9
1966-67 . . .	513,816	62,701	28,914	24,132	9,635	62,681	20

(a) County of Cumberland, City of Greater Wollongong, Shellharbour and Kiama Municipalities, and parts of Colo and Wollondilly Shires. (b) Includes provision for renewals, long service leave, etc.

*Local government country water supply and sewerage systems.* At 31 December 1969, country water supply services were conducted or under construction by 49 municipalities, 93 shires and 6 county councils, and country sewerage services by 44 municipalities and 71 shires. The capital indebtedness of these schemes was \$127,987,000 at 31 December 1969. Debt of the municipalities amounted to \$52,157,000, shires to \$59,147,000 and county councils to \$16,683,000. Government advances amounting to \$698,000 are included in these figures. Aggregate income and expenditure amounted to \$25,342,000 and \$18,819,000 respectively, in 1969.

*Other country water supply and sewerage systems.* The water supply and sewerage services for Broken Hill are operated by a statutory board, the Broken Hill Water Board. Its capital indebtedness at 31 December 1970 was \$5,273,000. In 1970, income (excluding subsidies, State Government \$241,000 and mining companies \$620,000) amounted to \$861,000 and expenditure (excluding debt redemption \$315,000) amounted to \$1,405,000. The Cobar Water Board was constituted in February 1964. At 31 December 1970 its capital indebtedness was \$2,204,000. The following country water supply systems—South-West Tablelands, Junee, and Fish River—are administered by the Department of Public Works. These supply water in bulk to municipalities and shires, the Electricity Commission of New South Wales, and other large consumers. Only a small quantity is sold direct to private consumers. The capital indebtedness of these systems was \$15,035,000 at 31 December 1970. The Mulwala Water Supply and Sewerage Service was constructed as an urgent war-time work for the Commonwealth, and the Bethungra Water Supply System is administered by the Department of Public Works in conjunction with the Junee supply.

## Victoria

*Melbourne and Metropolitan Board of Works.* The Board consists of a Chairman and fifty-two Commissioners elected to represent the municipalities which lie wholly or partly within the metropolitan area. The principal functions of the Board are: to control and manage the metropolitan water supply system; to provide the metropolitan area with an efficient main and general sewerage system; to deal with main drains and main drainage works; to control and manage the rivers, creeks and watercourses within the metropolitan area; and to carry out the functions of a permanent planning authority.

*Metropolitan water supply.* There are 5 storage reservoirs serving the metropolitan area—Yan Yean, 7,233 million gallons; Maroondah, 6,289 million gallons; O'Shannassy, 930 million gallons; Silvan, 8,853 million gallons; and Upper Yarra, 45,400 million gallons; total 68,705 million gallons. Service reservoirs number 56, with a total capacity of 397 million gallons. The following table shows particulars of Melbourne metropolitan water supply services for the years 1966-67 to 1970-71.

## MELBOURNE WATER SUPPLY: SERVICES, 1966-67 TO 1970-71

Year	Number of houses supplied	Estimated population supplied	Average daily consumption	Total consumption for the year	Average daily consumption		Length of aqueducts, etc., mains and reticulation	Number of meters
					Per house	Per head of estimated population		
		'000	mil. gal	mil. gal	gallons	gallons	miles	
1966-67	626,690	2,143	188.5	68,815	301	88.0	6,517	559,713
1967-68	642,039	2,170	139.0	50,876	216	64.1	6,791	577,713
1968-69	658,944	2,227	173.4	63,288	263	77.9	7,034	595,560
1969-70	676,111	2,285	183.7	67,063	272	80.4	7,176	612,074
1970-71	698,024	2,359	200.4	73,141	287	84.9	7,337	630,020

*Metropolitan sewerage and drainage.* Particulars of sewerage and drainage services for 1966-67 to 1970-71 are shown below.

## MELBOURNE SEWERAGE AND DRAINAGE: SERVICES, 1966-67 TO 1970-71

Year	Number of houses for which sewers are provided	Estimated population for which sewers are provided	Average daily pumping	Total sewage pumped for the year	Average daily pumping		Length of sewers, etc.	Length of main drains
					Per house	Per head of estimated population		
		'000	mil. gal	mil. gal	gallons	gallons	miles	miles
1966-67	484,798	1,629	98.1	35,793	202.3	60.2	4,554	233
1967-68	509,185	1,719	86.1	31,514	169.1	50.1	4,739	240
1968-69	528,983	1,788	96.7	35,300	182.8	54.1	4,906	250
1969-70	543,870	1,846	109.5	39,972	201.3	59.3	5,073	255
1970-71	559,000	1,898	111.5	40,695	199.5	58.7	5,213	260

The metropolitan sewerage system consists of the main system (serving an area of 121,765 acres) and 8 subsidiary systems—the Braeside system (serving an area of 6,800 acres), the Kew system (serving an area of 113 acres), the Maribyrnong system (serving an area of 182 acres), the Watsonia system (serving an area of 253 acres), the Lower Plenty system (serving an area of 1,907 acres), the Heatherton system (serving an area of 1,737 acres), the Altona system (serving an area of 257 acres) and the Chelsea system (serving an area of 670 acres). The Board of Works Farm, 26,809 acres in extent and situated about twenty-four miles south west of Melbourne beyond the township Werribee, serves to purify and dispose of approximately ninety-five per cent of the sewerage flow of the metropolis before its discharge into Port Phillip Bay.

*Melbourne and Metropolitan Board of Works' finances.* The following table provides for the year 1970-71 a summary of the financial operations of the water supply, sewerage and drainage services conducted by the Melbourne and Metropolitan Board of Works, and of the combined services for the years 1966-67 to 1970-71. The financial operations of the Board as the Authority responsible for metropolitan highways and bridges are referred to on page 609.



**MELBOURNE AND METROPOLITAN BOARD OF WORKS: FINANCES**  
1966-67 TO 1970-71

(\$'000)

Service, etc.	Capital cost of works and buildings at 30 June(a)	Revenue	Expenditure				Total	Surplus (+) or deficit (-)
			Working expenses	Works	Interest and exchange	Debt redemp- tion		
Water . . .	220,191	22,785	8,401	860	10,783	..	20,044	+2,741
Sewerage . . .	283,348	28,621	8,192	1,700	14,266	..	24,158	+4,463
Drainage . . .	39,802	5,958	1,968	990	1,651	..	4,609	+1,349
General(b) . . .	19,639	..	3,981	..	..	3,853	7,834	-7,834
<b>Total 1970-71 . . .</b>	<b>562,980</b>	<b>57,364</b>	<b>22,542</b>	<b>3,550</b>	<b>26,700</b>	<b>3,854</b>	<b>56,645</b>	<b>+ 719</b>
1969-70 . . .	505,957	49,097	18,685	3,600	23,668	3,443	49,396	- 299
1968-69 . . .	449,333	41,981	15,427	2,334	21,184	3,239	42,183	- 202
1967-68 . . .	411,221	35,587	13,213	1,776	19,258	2,685	36,932	-1,345
1966-67 . . .	376,271	32,111	12,333	..	17,834	2,552	32,719	- 608

(a) Total loan indebtedness—1970-71, \$497,868,732. (b) Statutory and general expenditure not distributed over services.

*State Rivers and Water Supply Commission.* Water supply and conservation throughout Victoria (except for the area controlled by the Melbourne and Metropolitan Board of Works) is under the jurisdiction of the State Rivers and Water Supply Commission. The events leading to the establishment of the Commission, and its various works are described in the chapter, Water Conservation and Irrigation.

### Queensland

The *Brisbane City Council* operates the water supply and sewerage systems of the City of Brisbane, and also supplies, in bulk, the whole of the water used by the City of Ipswich and a portion of that used by the City of Redcliffe and Albert Shire Council. Redcliffe supplements its supply from that of the Pine Rivers Shire Council, while Albert also draws on its own reservoirs. Storage facilities for *Brisbane water supply* comprise the following: Somerset Reservoir, 200,000 million gallons; Lake Manchester, 5,720 million gallons; Cameron's Hill Clear Water Reservoir, 20 million gallons; Holt's Hill Clear Water Reservoir, 10.5 million gallons; Enoggera Reservoir, 600 million gallons; Gold Creek Reservoir, 400 million gallons; Green Hill Reservoir, 17 million gallons; Tarragindi Hill Reservoir, 13.4 million gallons; and another twenty-five service reservoirs totalling 43.54 million gallons capacity. The total number of service reservoirs for Brisbane Water Supply is 27, with a capacity of 74 million gallons. The Somerset reservoir is a dual purpose project with a designed total holding capacity of 200,000 million gallons, 67,500 million gallons to be for water storage and 132,500 million gallons for flood mitigation. The following table is a summary of operations of the complete Brisbane City Council system (Brisbane, Ipswich, Redcliffe, and portion of Albert Shire) for the years 1966-67 to 1970-71.

**BRISBANE WATER SUPPLY(a): SERVICES, 1966-67 TO 1970-71**

Year	Services connected	Estimated population supplied	Average daily con- sumption	Total con- sumption for the year	Average daily consumption		Length of trunk and reticu- lation mains
					Per service	Per head of estimated population	
			mil. gal	mil. gal	gallons	gallons	miles
1966-67 . . .	202,886	740,332	66.1	24,110	326	89.2	2,735
1967-68 . . .	207,657	759,434	76.7	27,984	369	101.0	2,823
1968-69 . . .	213,445	772,356	85.4	31,170	400	110.6	2,834
1969-70 . . .	218,798	799,276	81.9	29,888	374	102.4	2,972
1970-71 . . .	223,911	807,168	85.5	31,221	382	106.0	3,062

(a) Includes Ipswich, Redcliffe and portion of Albert Shire.

The sewerage treatment works of the *Brisbane sewerage scheme* is situated at Luggage Point at the entrance to the Brisbane River. The following table is a summary of operations of the Brisbane sewerage scheme for the years 1966-67 to 1970-71.

BRISBANE SEWERAGE: SERVICES, 1966-67 TO 1970-71

Year	Premises connected	Estimated population served	Total sewage pumped for the year	Length of main, branch, reticulation, etc., sewers
			mil. gal	miles
1966-67 . . .	102,062	377,629	9,042	1,472
1967-68 . . .	109,364	404,647	8,358	1,607
1968-69 . . .	122,690	453,953	8,619	1,824
1969-70 . . .	143,245	530,007	9,313	2,048
1970-71 . . .	152,803	565,371	9,333	2,273

*Brisbane City Council water supply and sewerage systems—finances.* The following table shows particulars of the finances of the water supply and sewerage undertakings of the Brisbane City Council for the years 1966-67 to 1970-71.

BRISBANE WATER SUPPLY AND SEWERAGE: FINANCES, 1966-67 TO 1970-71  
(\$'000)

Service and year	Gross capital cost to 30 June	Revenue	Expenditure		Total(a)	Surplus (+) or deficit (-)	
			Working expenses	Interest, redemption etc., charges			
Water supply—							
1966-67 . . .	59,947	8,977	3,414	2,630	8,803	+	174
1967-68 . . .	64,626	9,808	3,661	2,760	9,132	+	676
1968-69 . . .	69,719	10,214	4,057	2,835	9,334	+	880
1969-70 . . .	77,255	10,697	4,134	2,995	10,145	+	552
1970-71 . . .	85,157	11,769	4,687	3,246	11,816	-	47
Sewerage—							
1966-67 . . .	61,517	5,535	1,024	1,966	4,709	+	826
1967-68 . . .	69,264	7,237	1,105	2,225	6,619	+	618
1968-69 . . .	72,123	8,404	1,250	2,443	7,696	+	708
1969-70 . . .	74,489	8,848	1,481	2,677	7,881	+	967
1970-71 . . .	77,802	10,524	1,961	3,064	9,261	+	1,263

(a) Total, including other expenditure.

*Other areas.* At 30 June 1970, of the 130 Local authorities in addition to the City of Brisbane, 126 had water supply schemes and 67 operated sewerage systems. The receipts (other than loan and loan subsidy) of water undertakings controlled by the cities and towns referred to above amounted to \$11,620,319 in 1969-70. Expenditure amounted to \$11,649,131, including \$4,993,538 for debt charges. In addition, expenditure from loans and loan subsidy amounted to \$10,942,839. Finances of sewerage undertakings are incorporated in council general funds and are not available separately.

### South Australia

The water supply and sewerage systems in this State were constructed mainly, and are maintained by the Engineering and Water Supply Department, under the control of the Minister of Works. Works controlled by the Department are the Adelaide, Barossa, Beetaloo, Bundaleer, Moorook, Tod River, Warren, Yorke Peninsula, and other country water districts systems, the Morgan-Whyalla water supply system, the metropolitan and country sewerage systems, the Metropolitan Flood Waters Scheme, and works on the River Murray constructed under the River Murray Waters Agreement. Several water supply schemes on the Murray River are administered by the Department of Lands in conjunction with irrigation works, and supplies to Woomera and Leigh Creek coalfield are controlled by the operating authorities.

*Adelaide waterworks.* At 30 June 1971 the Adelaide waterworks supplied districts covering 385 square miles of the metropolis and extending to near country areas. The capacity of reservoirs and storage tanks was 41,912 million gallons and there were 3,704 miles of metropolitan mains. The Mannum-Adelaide pipeline conveys water from the River Murray. Water is delivered to a terminal storage near Adelaide and thence to the metropolitan distribution system or alternatively it can be delivered into metropolitan reservoirs on the River Torrens or to reservoirs on the River Onkaparinga by further pumping. The pipeline also supplies various country areas along and extending from its route. A second River Murray pipeline extending from Murray Bridge to the River Onkaparinga is under construction.

## ADELAIDE WATERWORKS: FINANCES, 1966-67 TO 1970-71

(\$'000)

Year	Invested capital at 30 June (a)	Revenue	Expenditure		Total	Surplus (+) or deficit(-)
			Working expenses (b)	Interest		
1966-67	104,067	11,083	5,142	4,500	9,642	+1,441
1967-68	108,936	10,267	6,746	4,730	11,476	-1,209
1968-69	114,121	10,793	5,552	4,919	10,471	+ 322
1969-70	123,817	12,722	6,236	5,399	11,636	+1,086
1970-71	133,509	14,513	6,787	5,887	12,674	+1,839

(a) After deduction of depreciation. (b) Includes debt redemption.

*Adelaide metropolitan sewerage system.* The Adelaide metropolitan sewerage system, comprising the Adelaide, Glenelg, Port Adelaide, Christies Beach, and Salisbury-Elizabeth areas of 207 square miles in all, includes treatment works at Glenelg, Port Adelaide, Bolivar, and Christies Beach. Financial and other particulars for 1966-67 to 1970-71 are shown hereunder.

## ADELAIDE METROPOLITAN SEWERAGE: SUMMARY, 1966-67 TO 1970-71

Year	Length of sewers	Number of con- nections	Invested capital at 30 June(a)	Revenue	Expenditure		Total	Surplus
					Working expenses (b)	Interest		
	miles		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
1966-67	2,039	220,799	66,158	6,804	2,880	2,195	5,075	1,729
1967-68	2,125	227,489	74,808	7,156	3,375	2,822	6,197	959
1968-69	2,193	234,818	78,141	7,601	3,463	3,073	6,536	1,065
1969-70	2,276	244,239	84,080	8,644	3,716	3,601	7,317	1,327
1970-71	2,347	254,816	90,169	10,477	4,270	3,910	8,180	2,297

(a) After deduction of depreciation. (b) Includes debt redemption.

*Country sewerage schemes.* Sewerage schemes are operating at Port Lincoln, Naracoorte, Mount Gambier, Millicent, Lobethal, Gumeracha, Nangwarry, Mount Burr, Myponga, Mannum, Whyalla and Angaston. At Port Lincoln and Mount Gambier the sewers discharge to ocean outfalls, and treatment works are used on the other systems. There are 307 miles of sewers and 16,965 connections in the country systems. Sewerage schemes for Port Pirie, Murray Bridge and Gawler are under construction and operating in part.

*Country water supply.* Water districts systems at 30 June 1971 comprised an area of 15,849,000 acres. Supply came from reservoirs having a total capacity of 21,186 million gallons, from the River Murray, and from underground sources. Apart from local supplies, water from the River Murray is distributed over wide areas through the Mannum-Adelaide, Morgan-Whyalla, Swan Reach-Stockwell and Taillem Bend-Keith pipelines and branches of these pipelines. The principal areas of underground supplies are in the south-east of the State, where water from the Murray Basin can be had at moderate depths or from lakes, and from sand beds on Eyre Peninsula. In the year

1970-71 supplies made to Mount Gambier, Naracoorte and other towns in the south-east amounted to 1,322 million gallons, and the Unley-Wanilla, Lincoln and Poldas Basins contributed 1,123 million gallons to the Tod River Water District.

*Morgan-Whyalla water supply scheme.* This scheme, which has 223 miles of main via Port Augusta and 176 miles of main via the Spencer Gulf undersea crossing, was officially opened on 31 March 1944, the capital invested to 30 June 1971 being \$37,000,000. Apart from supplying Whyalla, the mains have been used to allow expansion of reservoir supplies in the northern agricultural area of the State, and to meet new demands caused by industrial growth at Whyalla, Port Pirie and Port Augusta. During 1970-71 water used from the scheme amounted to 5,116 million gallons.

### Western Australia

The principal water supply systems of Western Australia are under the control of two State authorities, the Metropolitan Water Supply, Sewerage and Drainage Board and the Public Works Department. The area which constitutes the territory administered by the Board encompasses approximately 1,600 square miles and extends from Perth southward to Rockingham and Serpentine, northward to Mullaloo, and eastward to Sawyers Valley and Kalamunda. The Public Works Department controls the Goldfields and Agricultural Water Supply and the Great Southern Towns Water Supply as well as 125 local water supplies (*see also* Chapter 23, Water Conservation and Irrigation). Four independent town schemes are controlled by local Water Boards in country areas, and individual water supplies serve railways, timber mill towns, isolated mines, pastoral properties, stock routes, and agricultural areas, mainly from dams, tanks, wells and bores.

*Metropolitan water supply, sewerage and drainage.* The sources of the metropolitan water supply are Serpentine Reservoir and Serpentine Pipehead Reservoir, Canning Reservoir, Churchman Brook Reservoir, Victoria Reservoir, Wungong Brook Diversion Weir and North Dandalup Pipehead Dam. The largest of these sources are the Serpentine Reservoir and the Canning Reservoir, which have a capacity of 39,000 million gallons and 20,550 million gallons respectively. Water from storages on the Darling Range is conveyed to service reservoirs to serve the City of Perth and the metropolitan area. A limited quantity of water is drawn from Mundaring Weir to serve sections of Greenmount, and to meet the peak demands of summer consumption supplies are supplemented from artesian bores, which can provide a daily maximum of 21 million gallons. The amount of bore water used is rarely more than 10 per cent of the metropolitan consumption and is usually considerably less.

The following table shows particulars of the *metropolitan water supply services* for 1966-67 to 1970-71.

METROPOLITAN WATER SUPPLY, WESTERN AUSTRALIA: SERVICES  
1966-67 TO 1970-71

Year	Number of services (a)	Average daily consumption	Total consumption for year	Average daily consumption per service (b)	Length of mains	Number of meters
		mil. gal	mil. gal	gallons	miles	
1966-67 . .	164,782	70.8	25,843	437	2,798	146,028
1967-68 . .	173,068	68.2	24,958	403	2,923	152,603
1968-69 . .	185,340	76.7	28,015	429	3,144	161,859
1969-70 . .	193,359	87.2	31,820	458	3,317	171,346
1970-71 . .	200,597	89.2	32,572	452	3,505	178,857

(a) Figures relate to 30 June.

(b) Calculated from averages for the year.



Some particulars of the *metropolitan sewerage and main drainage services* for 1966-67 to 1970-71 are shown in the following table.

**METROPOLITAN SEWERAGE AND MAIN DRAINAGE  
WESTERN AUSTRALIA: SERVICES 1966-67 TO 1970-71**

<i>Year</i>	<i>Services</i>	<i>Length of sewers</i>	<i>Length of main drains</i>
		miles	miles
1966-67 . . . .	71,188	848	109
1967-68 . . . .	72,177	886	118
1968-69 . . . .	74,018	931	126
1969-70 . . . .	76,638	988	141
1970-71 . . . .	81,940	1,136	157

*Metropolitan Water Supply, Sewerage and Drainage Board—finances.* The following table shows particulars of the finances of the Western Australian Metropolitan Water Supply, Sewerage and Drainage Board.

**METROPOLITAN WATER SUPPLY, SEWERAGE AND MAIN DRAINAGE  
WESTERN AUSTRALIA: FINANCES, 1966-67 TO 1970-71**

(\$'000)

Service and year	Capital cost to 30 June	Revenue	Expenditure		Total	Surplus
			Working expenses	Interest and debt redemption		
Water supply—						
1966-67 . . . .	62,137	5,551	2,307	3,061	5,368	183
1967-68 . . . .	66,217	5,782	2,292	3,243	5,535	247
1968-69 . . . .	74,078	7,162	2,322	3,510	5,832	1,331
1969-70 . . . .	82,482	7,915	2,808	3,949	6,757	1,159
1970-71 . . . .	92,284	8,371	3,389	4,460	7,850	521
Sewerage—						
1966-67 . . . .	26,737	3,000	1,622	1,340	2,961	38
1967-68 . . . .	29,286	3,198	1,689	1,474	3,164	34
1968-69 . . . .	34,027	3,809	1,771	1,637	3,408	401
1969-70 . . . .	40,821	4,162	1,983	1,867	3,850	313
1970-71 . . . .	48,500	4,508	2,255	2,214	4,470	38
Main drainage—						
1966-67 . . . .	6,956	629	298	319	617	12
1967-68 . . . .	7,433	721	314	349	663	58
1968-69 . . . .	8,657	872	327	375	702	170
1969-70 . . . .	9,838	951	353	407	760	192
1970-71 . . . .	10,699	1,144	448	467	915	228

*Country water supplies.* Information relating to country water supplies is included in Chapter 23, Water Conservation and Irrigation.

### Tasmania

*Waterworks.* During the year 1970-71, water was supplied to over 103,000 properties which consumed approximately 15,700 million gallons.

In Tasmania, water supply was once the exclusive responsibility of the city and municipal councils. In recent years, two semi-government authorities have been set up to operate bulk supply schemes for distribution by the local government authorities in the Hobart and Launceston areas, and directly to some industrial consumers. The North Esk Regional Water Supply Scheme is operated by the Rivers and Water Supply Commission as a State concern, supplying bulk water to the municipalities of St Leonards, George Town, Lilydale, and portion of Westbury. This scheme supplies water to

industries situated near the Tamar River. Also vested in the Commission is the West Tamar Water Supply Scheme which serves the Municipality of Beaconsfield, and is operated by the Beaconsfield Council as the agent of the Commission. The over-all control of water supply in the greater Hobart area, comprising the municipalities of Hobart, Clarence, Glenorchy, and Kingborough, is vested in the Metropolitan Water Board, but the municipalities retain primary responsibility for reticulation. The Board has constructed a large pumping station at Bryn Estyn, near New Norfolk, which supplies bulk water from the Derwent River to the metropolitan area and has a pipeline capacity of 20 million gallons a day. In addition, the Board also controls the Southern Regional Water Supply Scheme with a pipeline capacity of 6.9 million gallons a day which supplies water to Hobart's eastern shore and nearby towns.

*Sewerage.* At the end of 1970-71 the number of tenements connected to sewerage services was about 81,000, about 60 per cent of sewerage discharge is subject to treatment.

### **Northern Territory**

Information relating to water supply in the Northern Territory may be found in Chapter 23, Water Conservation and Irrigation.

### **Australian Capital Territory**

The water supply, sewerage and drainage systems in the Australian Capital Territory are under the control of the Commonwealth Department of Works. The sources of the water supply are: Cotter Dam (capacity 1,034 million gallons), Bendora Dam (2,360 million gallons) and Corin Dam (16,600 million gallons). Water is fed from Bendora Dam by gravity to 22 major reservoirs. The maximum daily supply is 57 million gallons. An alternative supply is available from 9 pumps at the Cotter Dam at a rate of 38 million gallons per day.

The total population served in the Australian Capital Territory, which during 1970-71 consumed 6,300 million gallons of water, was 135,000 (at 31 December 1970). In addition, the Canberra water supply system supplied 420 million gallons of water to Queanbeyan, New South Wales. The total number of water meters at 30 June 1971 was 37,400 and the total length of water lines was 743 miles.

The sewerage system for Canberra suburbs has three treatment works: the Weston Creek works provide for 120,000 persons, the Fyshwick works provide for 20,000 persons and the Belconnen works provide for 25,000 persons. There were 725 miles of sewerage, and 9 miles of sewer rising mains (at 30 June 1971). There were also 736 miles of storm-water drains.

## **Harbour boards and trusts**

The number and net tonnage of vessels which entered the major ports in each State during the years 1969-70 and 1970-71 are shown in Chapter 12, Transport, Communication and Travel (*see* page 341). Particulars of overseas and interstate cargo discharged and shipped are shown on pages 341-2 of the same chapter.

### **New South Wales**

*The Maritime Services Board of New South Wales* exercises general control over intra-state shipping, including the survey and certification of vessels, the licensing of harbour craft and the examination and issue of certificates to officers. It is responsible for the provision of pilotage services, lights, beacons, buoys and other port facilities, imposes and collects rates and charges on goods and vessels, and is vested with the general control and management of the navigable waters and ports within the State. At the ports of Sydney, Newcastle and Botany Bay the Board is also responsible for the provision of adequate wharfage and channels and carries out all construction, maintenance and dredging work. Since 1 February 1936 the State enactments on port charges, including the Navigation Act of New South Wales, the Harbour and Tonnage Rates Act and the Sydney Harbour Trust Act, have been administered by the Maritime Services Board. The total revenue collections by the Maritime Services Board amounted to \$37,732,000 in 1970-71. This figure includes the revenue for the ports of Sydney, Newcastle and Botany Bay.

Financial details relating to these three ports are shown in the following table.

**MARITIME SERVICES BOARD FUND: FINANCES OF THE PORTS OF SYDNEY  
NEWCASTLE AND BOTANY BAY, 1966-67 TO 1970-71**  
(\$'000)

Year	Revenue				Expenditure(a)			Surplus(+) or deficit(-)
	Wharfage and transshipment rates	Tonnage rates and berthing charges	Other charges	Total	Administration and maintenance	Interest, debt redemption, exchange, etc.	Total	
1966-67	11,501	1,895	4,282	17,678	9,476	8,113	17,589	+ 89
1967-68	12,664	2,024	5,645	20,333	10,830	9,451	20,280	+ 53
1968-69	13,580	2,085	7,294	22,959	12,150	10,716	22,866	+ 93
1969-70	14,854	2,271	7,875	25,000	12,816	12,120	24,937	+ 64
1970-71	15,105	2,150	13,042	30,297	15,885	14,642	30,527	- 229

(a) Excludes capital expenditure but includes transfers to the Renewals Fund Reserve Account (\$3,975,000 in 1966-67, \$4,940,000 in 1967-68, \$5,800,000 in 1968-69, \$6,760,000 in 1969-70, and \$9,140,000 in 1970-71).

*Port of Sydney.* The wharves are situated close to the business centre of the city, about 4 or 5 miles from the Heads. At 30 June 1971 there were 4 dolphin berths, 3,200 feet long, and 62 effective commercial cargo berths, with a total length of 35,467 feet, controlled by the Board. Accommodation for harbour craft amounts to 2,245 feet, while the length of other berths, including oil and private wharves, totals 5,752 feet. Depth of water at wharves is up to 43 feet. Special facilities for the storage and handling of products such as wheat, wool, coal, etc. are provided. Docking facilities are available for large vessels at the Captain Cook Graving Dock. Container facilities became available in March 1969 with the opening of the eastern section of the Balmain container terminals to cellular container vessels.

*Port of Newcastle.* Shipping at Newcastle is concerned primarily with the coal, iron and steel and other heavy industries located in the district. However, facilities are available for the shipment of wool, wheat and frozen meat, and a wharf is available for timber.

*Botany Bay.* The port is primarily a discharging centre for the oil refinery at Kurnell, near Sydney, and one jetty with a tanker berth each side of the jetty is available as well as three tanker offshore moorings with submarine pipelines.

*Port Kembla* is the port of the southern coalfields and for the major industrial areas in and about Wollongong.

*Other ports.* In addition to the port of Sydney, Newcastle, Port Kembla, and Botany Bay, the Board controls 29 outports along the coastline of 609 miles. The shipping trade of these outports is relatively small.

## Victoria

The *Port of Melbourne* comes under the control of the Melbourne Harbor Trust Commissioners, a financially independent statutory organisation, with a full-time chairman and five part-time commissioners. The area of water and land under the control of the Trust is 10½ square miles, with sheds available for cargo in transit totalling 22,928 feet in length and covering an area of about 43 acres. Three of the largest transit sheds on the Australian coast are in operation at Appleton Dock. The sheds are 600 feet long by 150 feet wide, each with a cargo stacking area of 81,000 square feet. The berths are used for conventional general cargo trade as well as the unit-load container handling for general cargo in the overseas trade. The total length of wharves, piers and jetties in the port is 61,550 feet, covering an area of about 59 acres with 50,834 feet of effective berthing space.

In line with world-wide changes in cargo handling methods, current planning and construction in the Port of Melbourne are almost exclusively devoted to facilities catering for container ships and cargo as well as for the multi-purpose unit-load-container-conventional ships and cargo. The port's first overseas container terminal, Swanson Dock, which has 1,600 feet of concrete wharf apron with 24 acres stacking area behind the berth, was officially opened on 7 March 1968. Two additional

800 feet long 'common user' container berths on the east side of Swanson Dock are expected to be completed in 1972. Two roll-on/roll-off container unit-load berths were completed in early 1969, one at North Wharf for the trans-Tasman trade to New Zealand, having a 580 feet wharf apron and 3.3 acre stacking area behind the berth and the other at Webb Dock, with a 600 feet wharf apron and additional 11.3 acre stacking area for the eastern seaboard trade.

The depth of water (low water ordinary spring tide) from the main channels to the principal wharves is 31 to 37 feet.

The following table shows particulars of the financial operations of the Trust.

MELBOURNE HARBOR TRUST: FINANCES, 1967 TO 1971  
(\$'000)

Year	Gross loan indebtedness at 31 December	Revenue		Total	Expenditure			Total	Surplus
		Wharfage and tonnage rates			Operation, administration and maintenance	Interest, debt redemption, exchange, etc.	General reserve, depreciation, renewals and insurance account		
1967	.	34,484	6,692	11,322	6,441	2,142	2,567	11,150	172
1968	.	36,029	8,357	13,573	6,972	2,381	4,002	13,355	218
1969	.	37,888	8,901	14,321	7,903	2,127	4,049	14,079	242
1970	.	40,690	9,475	15,047	8,512	2,869	3,419	14,800	247
1971	.	44,059	10,038	16,263	9,719	3,152	3,158	16,029	233

The *Port of Geelong* operated by the Geelong Harbor Trust, has available 17 effective berths, plus 2 berths at the Commonwealth Explosives Pier, Point Wilson, owned and operated by the Commonwealth. Two modern dry bulk berths (Lascelles Wharf Nos 1 and 2 berths) became fully operational in 1970 and a roll-on/roll-off berth at Corio Quay came into operation in January 1971.

The *Port of Portland* continued to expand the range of facilities available for maritime trade during the year 1970-71 through the erection of a cold store complex and transit shed, and the construction of a 4 million bushel horizontal wheat store linked with the Harbor Trust's bulk grain terminal and existing shipping facilities. Total trade handled exceeded the previous year's figure by 38.3 per cent and operating revenue rose by 42.9 per cent to \$1,248,000.

### Queensland

The ports of Queensland generally are administered by harbour boards with members representing the cities, towns and districts served by the ports. Where no board is established, control is exercised by the Corporation of the Treasurer through the Department of Harbours and Marine.

Harbour Board ports are Bowen, Bundaberg, Cairns, Gladstone, Mackay, Rockhampton and Townsville.

Corporation of the Treasurer principal ports are Brisbane, Hay Point, Lucinda, Maryborough, Mourilyan, Thursday Island and Weipa.

*Brisbane*, the busiest port in the State, is a river port of world standard dredged to a sufficient depth to accommodate all classes of vessels on the Australian trade. The port, as well as providing wharves for containers, bulk grain fertiliser, freezer goods, petroleum products and general cargo also provides shipbuilding and ship repair facilities including a dry dock accommodating vessels up to 70,000 tons deadweight. Two refineries, situated at the mouth of the river can supply all ships' bunkering requirements.



The finances of Brisbane Harbour for the years 1966-67 to 1970-71 are shown in the following table.

BRISBANE HARBOUR: FINANCES, 1966-67 TO 1970-71  
(\$'000)

Year	Loan indebtedness at 30 June	Receipts		Payments	
		Harbour dues	Total	Working expenses(a)	Total
1966-67 . . .	4,636	2,044	2,987	2,228	2,561
1967-68 . . .	4,504	2,019	3,475	3,039	3,376
1968-69 . . .	4,890	2,333	3,622	3,156	3,483
1969-70 . . .	5,726	2,320	3,772	4,542	4,927
1970-71 . . .	5,576	2,685	3,788	3,556	4,004

(a) Excludes interest and redemption included in total.

### South Australia

*Department of Marine and Harbors.* All South Australian harbours are controlled by the Department of Marine and Harbors, which is responsible to the Minister of Marine for the discharge of its duties and functions. The most important ports are the six deep-sea ports of Port Adelaide, Port Pirie, Wallaroo, Port Lincoln, Port Giles and Thevenard. In South Australia there are also eight privately-owned and operated ports. The principal of these are Whyalla, Ardrossan, Rapid Bay, and Proper Bay (Broken Hill Pty Co. Ltd), Port Augusta (Commonwealth Railways) and Port Stanvac (Petroleum Refineries (Aust.) Pty Ltd). Maximum depths of water (low water) at the wharves of the main ports range from 27 feet at Port Pirie to 35 feet at Port Adelaide. The following table shows the finances of the Department for 1966-67 to 1970-71.

DEPARTMENT OF MARINE AND HARBORS, SOUTH AUSTRALIA: FINANCES  
1966-67 TO 1970-71  
(\$'000)

Year	Loan indebtedness at 30 June	Revenue	Expenditure from revenue			Surplus
			Working expenses	Interest	Total	
1966-67 . . .	44,264	6,734	4,019	1,807	5,827	907
1967-68 . . .	45,478	6,418	4,196	1,869	6,065	352
1968-69 . . .	47,614	6,653	4,365	1,957	6,322	331
1969-70 . . .	50,736	7,282	4,265	2,176	6,442	840
1970-71 . . .	55,081	7,628	5,056	2,431	7,487	141

### Western Australia

The *Port of Fremantle* is operated and controlled by the Fremantle Port Authority. The port covers an extensive water area of some 180 square miles and comprises an inner and an outer harbour. The inner harbour includes 20 deep-water land-backed berths, providing more than 600,000 square feet of covered storage space and 13,104 feet of wharf berth accommodation. All inner harbour berths are dredged to a low water depth of 36 feet. The outer harbour includes 3 main anchorages, Gage Roads, Owen Anchorage and Cockburn Sound. Deep-water jetties, including the oil refinery jetty in Cockburn Sound, are available in the outer harbour. Ocean-going deep draft ships enter the Sound by means of a channel dredged through Success and Parmelia Banks to a low water depth of 45 feet and a bottom width of 500 feet. In the outer harbour there are 3 tanker berths each with a low water depth of 44 feet at the Kwinana oil refinery, 2 berths at the nearby steelworks jetties with a low water depth of 38 feet, 2 berths at the alumina works jetty with a low water depth of 40 feet and 1 berth at the bulk cargo jetty with a low water depth of 44 feet. There is also a special berth for the handling of explosives. Total effective berth accommodation in the outer harbour is 6,110 feet. Gross earnings for 1970-71 amounted to \$10,832,454, working expenses to \$7,639,235, interest charges on loan capital \$1,271,273, and loan indebtedness totalled \$23,809,432.

The Ports of *Albany*, *Bunbury*, *Esperance*, *Geraldton* and *Port Hedland* are controlled by their respective Port Authorities.

*Other ports.* The following ports are controlled by the State Government Harbour and Light Department: Broome, Busselton, Carnarvon, Derby, Onslow, Port Walcott, and Wyndham. Ports privately controlled comprise Yampi and Dampier, both operated by iron ore mining companies, and Exmouth, the port serving the communications installation at North West Cape. A private buoyed sea terminal is operated at Barrow Island for the shipment of crude oil, and private interests ship salt at Cape Cuvier, and salt and gypsum from Useless Loop in Shark Bay.

### Tasmania

Port services in Tasmania are under the control of eight port authorities: the Marine Boards of Hobart, Devonport, Burnie, Circular Head (Stanley), King Island (Currie), and Flinders Island (Whitemark); the Port of Launceston Authority and the Smithton Harbour Trust. The ports at Hobart, Launceston (Bell Bay), Burnie and Devonport are general cargo terminals for overseas shipping. Other ports catering primarily for overseas export of specialised cargoes include Port Latta (iron ore pellets), Triabunna (wood chips), and Port Huon (fruit).

#### AUTHORITIES CONTROLLING PORTS, TASMANIA: FINANCES 1966-67 TO 1970-71

(\$'000)

Authority	Loan indebtedness at 30 June (a)	Receipts (revenue account) Total	Expenditure (revenue account)		Total (b)	New Loans raised	Loan expenditure
			Works and Services	Loan charges			
Hobart . . .	4,378	2,031	771	388	1,646	1,100	1,965
Launceston . . .	6,504	2,274	1,089	515	1,968	1,470	1,614
Devonport . . .	6,921	1,446	285	921	1,388	1,101	673
Burnie . . .	12,462	1,184	398	626	1,171	750	757
Circular Head . . .	526	74	11	54	77	50	32
King Island . . .	79	95	45	9	67	..	..
Strahan(a) . . .	..	1	7	9	17	..	..
Flinders Island . . .	187	25	12	14	29	..	..
Smithton . . .	..	2	1	..	2	..	..
<b>Total 1970-71</b>	<b>31,057</b>	<b>7,133</b>	<b>2,618</b>	<b>2,535</b>	<b>6,366</b>	<b>4,471</b>	<b>5,042</b>
1969-70	27,464	6,765	3,051	2,300	6,347	3,910	3,386
1968-69	24,376	6,274	2,817	2,011	6,253	2,837	4,574
1967-68	22,249	5,953	2,272	1,921	5,433	2,598	2,395
1966-67	20,361	5,628	2,711	1,646	5,333	2,310	2,184

(a) Strahan Marine Board was taken over by the Hobart Marine Board on 1 October 1970. Receipts and expenditure since that date and loan debt from 30 June 1971 are included with Hobart Marine Board. (b) Includes expenditure not specified in component items.

## CHAPTER 19

### EDUCATION, CULTURAL ACTIVITIES, AND RESEARCH

For the most recent statistics available on subjects dealt with in this chapter reference should be made to the series of mimeographed bulletins on social statistics issued by this Bureau. These bulletins comprise *Schools* (13.5), *University Statistics Parts 1, 2, 3* (13.7, 13.8, 13.9), *Colleges of Advanced Education* (13.10) and *Teacher Education* (13.12). The *Quarterly Summary of Australian Statistics* (1.3) contains summarised information on these subjects, and financial aspects are dealt with in the annual bulletins *Public Authority Finance—Commonwealth Authorities* (5.12), *Public Authority Finance* (5.33) and *Public Authority Finance—State and Local Authorities* (5.42). The annual Reports of the respective State education departments provide detailed statistical and other information about particular States. Publications on education in Australia, secondary schooling, and other topics are issued by the Commonwealth Department of Education and Science.

#### EDUCATION

An account of the development of the Australian school system up to 1929 may be found in *Year Book No. 22*. In *Year Book No. 40* a review of changes which occurred up to 1951 and of the practices then current was presented. The present situation is summarised in the early part of this chapter, in textual material provided by the Commonwealth Department of Education and Science.

#### Pre-school education

Pre-school centres were first established in the Australian States by voluntary organisations and a large number are still supported and supervised by them. The organisations include kindergarten unions, day nursery and creche associations, pre-school associations and denominational kindergartens. All now receive financial assistance from State governments but the amounts granted vary considerably from State to State. Other pre-schools are subsidised directly by States. In Tasmania pre-school teachers are employed by the State Education Department and in the internal Territories by the Commonwealth Department of Education and Science; buildings are also provided in the Territories. In all cases parents assist in the provision of equipment.

Pre-school centres are situated in city and country areas and programmes are adapted to meet the needs of the children attending. A typical pre-school centre provides half-day sessions for two groups of children. Active parent participation in the running of the centres is encouraged. A limited number of creches and day nurseries provide full-care in closely settled areas, and there is an increasing demand for care for children of working mothers, met in part by privately run centres of varying standards. In a few cities occasional care is available and there are a few residential centres.

The Australian Pre-School Association is a national body comprising all the voluntary organisations who have as their main concern the welfare and education of children of pre-school age. With some financial assistance from the Commonwealth the Association co-ordinates pre-school work for which it sets standards. It administers and supervises the six Lady Gowrie Child Centres which were established by the Commonwealth in consultation with the Australian Pre-School Association in 1940.

*Lady Gowrie Child Centres.* These six Centres, one in each State capital city, were planned to give stimulus to progress in the field of child development, and this has led to the study of educational practice at the pre-school level. They provide opportunities for demonstration and research based on early childhood education. Committees of local management for each Centre include psychiatrists, paediatricians, nurses, social workers, educators and lay persons, who, in consultation, have developed an education programme based on child development.

The Centres are financed mainly by Commonwealth grants. The Commonwealth contribution for 1971-72 was \$195,000.

Radio and television bring some experience of pre-school education within the reach of practically every pre-school child in Australia. The Australian Broadcasting Commission pioneered the programme 'Kindergarten of the Air', a twenty-five minute session, broadcast throughout the country from Monday to Friday. This session is designed to reach children in isolated areas. The half-hour television programme 'Play-School' is also available twice each week-day to children of kindergarten age in State capital cities and some country areas.

## Education in Australian Schools

### Administration and organisation

In Australia the provision of schools is mainly the responsibility of State governments. During the nineteenth century all six Australian colonies had established systems of compulsory education, beginning with the *Education Act* 1872 in Victoria, and followed by similar Acts in Queensland (1875), South Australia (1875), New South Wales (1880), Tasmania (1893), and Western Australia (1893). After Federation in 1901 education was one of the responsibilities retained by the States, and these Acts, with subsequent amendments, constitute the legal basis of compulsory education in the Australian States today. The Commonwealth has responsibilities for the provision of education facilities in the Northern Territory and the Australian Capital Territory. The government school system in the Australian Capital Territory is staffed by the New South Wales Department of Education and follows the educational syllabus of that State, the cost being recovered from the Commonwealth Government. Until 1970, a similar arrangement existed with the South Australian Department of Education on the operation of schools in the Northern Territory. However, the Commonwealth Government has taken action to accept direct responsibility for the operation of schools in both the Australian Capital Territory and the Northern Territory and to this end has established the Commonwealth Teaching Service. The Commonwealth also provides direct financial assistance in various forms to schools throughout Australia.

School attendance is compulsory throughout Australia between the ages of six and, at least, fifteen. The minimum leaving age is fifteen years in New South Wales, Victoria, Queensland, and South Australia, and sixteen years in Tasmania, while in Western Australia attendance is compulsory until the end of the year in which the child turns fifteen years. The Education Acts require that all children between the prescribed ages must attend either a government school or some other recognised educational institution. Children may be exempted from the requirement of compulsory attendance if they live too far from a school, suffer a physical disability, or in cases of family hardship. Where required, these children usually receive correspondence tuition.

The school year in Australia begins at the end of January or early in February; it ends in mid-December. The long vacation is taken over the summer months (December to February) and two short vacations divide the school year into three terms.

At government primary schools it is usual for both boys and girls to attend the same school; at the secondary level practices vary, but the trend is towards co-educational schools. Non-government secondary schools cater mainly for boys and girls separately but recently a few major independent schools have become co-educational.

### Government school systems

Although the educational systems in the six States are not identical, they have many similar features. Responsibility for framing and implementing educational policy rests with a Minister for Education, who is a member of the State Cabinet. The administrative authority in each State is an education department headed by a Director-General of Education. Separate divisions of the education department in each State administer primary, secondary and technical education (in New South Wales there is a separate Department of Technical Education). Other divisions look after such matters as the recruitment and training of teachers, student guidance, research, and the education of atypical children. In New South Wales, Victoria, and Queensland, administration has been decentralised to a degree by the appointment of directors who are responsible for policy in the area which they control.

Tuition at government primary and secondary schools is free in all States. Parents are usually expected to bear the cost of textbooks, uniforms and charges for such things as the use of sports materials. However, income tax concessions exist in respect of these expenditures for both government and non-government systems, and certain textbook costs are subsidised in the case of students attending government and non-government schools in some States.



### Non-government school systems

Approximately 23 per cent of Australian school children were enrolled at non-government primary and secondary schools in 1971, and about 81 per cent of these attended Roman Catholic schools. The majority of other non-government schools, sometimes known as 'private' or 'independent' schools, are conducted by, or are under the auspices of, various other religious denominations, particularly the Church of England, Presbyterian and Methodist Churches. A few non-government schools are undenominational and are conducted under the auspices of corporate bodies. Non-government schools follow curricula similar to those laid down by State education departments, and prepare their students for examinations conducted by public examining bodies.

The methods adopted by the education authorities to ensure an acceptable standard of education at non-government schools vary from State to State. New non-government schools are inspected so that they might obtain approval from the State education department. The nature of this approval varies but generally the education department must be satisfied that the education provided at a non-government school is efficient and that the buildings and facilities are suitable. In Victoria and Tasmania teachers are required to be registered and the Queensland Education Act was amended recently to provide for the registration of teachers.

The principals of a number of the larger non-government schools have formed organisations with both State and Australia-wide coverage, namely the Headmasters Conference of the Independent Schools of Australia and the Association of Heads of Independent Girls Schools of Australia. The National Council of Independent Schools represents all independent schools and aims to promote their interests.

Most Roman Catholic parish schools charge fees, but payment is not insisted on in the case of families who cannot afford it. At the majority of non-government secondary schools, privately endowed scholarships are available, and reductions in fees are normally made for children of clergy or for two or more members of one family attending the same school. With these exceptions, students of non-government schools must pay fees.

Certain State scholarships and bursaries are tenable at approved non-government secondary schools. From the establishment of school systems by the State governments, official policy has been largely against the provision of direct financial assistance to non-government schools, but since 1967, all State Governments and the Commonwealth Government have introduced some system of direct assistance to non-government schools, usually in the form of student allowances. Most States also assist non-government schools in approved building projects. For details of Commonwealth finance for the building and equipping of science laboratories and school libraries, see pages 662-3.

### Schools and courses

A diagram of State and Territory school systems, showing current grades, examinations, and age levels is shown on Plate 36 page 635.

*Primary education.* Though school attendance is not compulsory until the age of six, many children begin school before that age, attending infants schools or infants classes attached to a primary school. In some States the first year in the infants department is known as 'kindergarten'. The emphasis in infants classes is on the development of skills in language and numbers.

Primary schools are normally provided when and where there is sufficient population to justify them. Irrespective of the size or the location of the school, standards of tuition are similar because teachers within a State follow similar courses of training and transfer between metropolitan and country areas. The education departments prescribe syllabuses of instruction, which are drawn up with the assistance of expert committees.

There is no external examination at the end of primary schooling and progression from primary to secondary school is usually automatic. Allocation to particular schools or particular courses is based on the recommendations of the headmaster, general ability tests, tests of achievement in the basic subjects, parents' wishes and the district in which the child lives.

*Secondary education.* The age of transfer from a government primary to secondary school is usually between twelve and thirteen. In general, students in the early years of secondary schooling study a basic core of subjects together with some electives, specialisation taking place at a later stage in the course. The actual subjects studied depend on the ability of the student and, in some States, the type of school.

The most common type of secondary school is the comprehensive or multi-purpose high school, which offers a wide range of subjects. To cater for this diversity of subjects, most high schools now have modern facilities for the teaching of domestic science, commercial subjects, woodwork, and other technical subjects. In some States there are still, however, separate high schools specialising

in technical, agricultural, commercial, or home science subjects. Some of the agricultural high schools are residential. The curriculum consists of general educational subjects and practical farm training. There are also 'area' and 'rural' schools offering up to three years of secondary study.

Experimental projects in curriculum development are being carried out, and individual schools and teachers have more freedom in choosing their educational programmes. As in the primary schools, increasing use is being made of modern teaching aids, and many of the larger schools have well-equipped libraries, language laboratories and science facilities.

### Examinations

For information on examination procedures up to 1971, see Year Book No. 55, pages 485-6 and Year Book No. 57, page 629.

Traditionally, public examinations set by central examining authorities in each State at junior and senior secondary levels controlled and influenced the curricula to a very large extent. In recent years the junior level examinations, taken at the end of the third or fourth year of secondary schooling, have been abolished, or will be shortly, and their place has been taken by internal school examinations and school assessment. While the senior level examinations, taken in the final year and used for matriculation purposes, are still retained in most States, there is a trend towards the abolition of external examinations at this level also. These changes in the examination systems have allowed the development of more broadly-based curricula designed to meet the varying needs, interests and abilities of the students, an increasing proportion of whom are staying on at school beyond the minimum leaving age.

Students may gain their first examination certificate at the end of the third, fourth or fifth year of secondary schooling (see Plate 36, page 635) on the basis of an external or internal examination, a school assessment, or a combination of these, depending upon the State. At this stage, students may qualify for entry to trade courses at technical colleges and to some agricultural colleges, to commercial employment such as junior positions in insurance and banking, to nursing and secretarial courses, and to some positions in the public service and industry. The matriculation examination at the end of the secondary course (known variously as the Higher School Certificate, Leaving Certificate, Matriculation and Senior examination) qualifies students for entry to universities, colleges of advanced education, teachers colleges, institutes of technology, the higher grades of the public service and many commercial positions.

### Special facilities for students

Details of medical and dental inspection of school children, and the provision of free milk are given in Chapter 14, Public Health. In Year Book No. 55, a general description is given of provisions for isolated areas, schools of the air and correspondence schools (pages 494 and 495), handicapped children and physical education (page 495), and educational guidance and school broadcasting and television (page 496). The following particulars supplement that information.

*Aboriginal education.* Aboriginal children in towns and cities attend the same schools as other Australian children, but special schools for Aborigines have been developed on isolated settlements and mission stations, financed partly or wholly from government sources. A special Commonwealth Committee has been set up to advise on the educational and related needs of Aboriginal children enrolled in community schools in the Northern Territory. Education is one of the areas of Aboriginal affairs which has received considerable stimulation from Commonwealth assistance, financial and otherwise, following the 1967 Referendum and *Constitution Alteration (Aboriginals) 1967*.

*School broadcasting.* Both radio and television school broadcasts continue to be used extensively by schools. They are produced by the Australian Broadcasting Commission and, as a result of the increasing number of transmitting stations, are now available to almost all schools in the Commonwealth. Approximately 91 per cent of schools make some use of the radio programmes and about 70 per cent, of television. During the year almost 3,000 radio programmes and about 300 television programmes were produced and, in addition, over 200 television programmes, relevant to Australian needs, were purchased overseas. The increasing use of audio and videotape recorders by schools, especially in secondary departments, gives a flexibility of usage that has greatly increased the utilisation of programmes. There are about 10 hours of radio and 25 hours of television available each week in each State.

*Handicapped children.* The Commonwealth Department of Social Services, in conjunction with the Commonwealth Departments of Health and of Education and Science, commenced a survey of handicapped children in 1970. Payments under the *States Grants (Independent Schools) Act 1969*, which provides assistance to eligible independent schools, including special independent schools for handicapped children, commenced in 1970. Assistance to eligible institutions training handicapped children is also available under the *Handicapped Children (Assistance) Act 1970*. See also page 662.



### **Scholarships and bursaries**

All States have schemes of financial assistance to school students, mostly at the secondary level, through scholarships or bursaries. As tuition in government schools is free, this assistance is usually in the form of maintenance allowances, both for children living with their parents and for those living away from home. These may be paid in a lump sum or in instalments throughout the year. Awards are usually made on the results of a competitive examination, and sometimes a means test is applied. Other government and private authorities, such as the Repatriation Department and the Legacy War Orphans Fund, assist certain categories of students with their school education. Many non-government schools also award scholarships, on a competitive basis, which enable students to attend the particular schools at reduced fees or without payment of fees.

In 1964 the Commonwealth Government, with the co-operation of the State education departments, introduced a programme of secondary scholarships to encourage successful candidates to complete the final two years of secondary schooling. Further details of the Commonwealth Secondary Scholarships Scheme and the Commonwealth Technical Scholarship Scheme are given on page 654.

Various forms of financial assistance, both government and non-government are available to help Aborigines to undertake further studies. In 1971, over 700 scholarships were awarded by ABSCHOL, a scholarship scheme organised by the Australian Union of Students, 962 primary and 222 secondary scholarships were provided by the Aboriginal Education Incentive Scholarship Fund in Victoria; and 95 scholarships for primary, secondary and adult studies were provided by the Aboriginal Education Council in New South Wales. See page 655 for details of the Aboriginal Study Grants Scheme, begun in 1968 by the Commonwealth.

### **Subsidised transport to and from school**

All the States have systems of subsidies by which transport is free or at a concession rate for children who have to travel to and from school daily. In some States an allowance is paid if private transport has to be used.

### **Subsidies to children living away from home**

For children whose homes are too far away from a secondary school to allow daily travel, some States run hostels or give financial assistance to privately owned hostels. The States also pay boarding allowances to the holders of State bursaries or scholarships and, in some cases, agricultural scholarships include free board at an agricultural high school.

### **School buildings**

The increase in the school population in the last decade led to an expansion in school building. To cope with this growth in population, it has been necessary to make use of temporary and emergency structures. Quite large schools are being built in stages to match increases in local population in new and rapidly developing suburbs in metropolitan areas. For details of assistance provided by the Commonwealth for the building and equipping of science laboratories and library facilities in secondary schools see pages 662-3.

### **Textbooks, materials and other equipment**

The State education departments supply government schools free of charge with essential equipment including scientific apparatus, maps, blackboards, chalk, cleaning materials, and non-consumable equipment for commercial, home science and manual training. Garden tools and physical training equipment are also supplied in most States. Readers and writing equipment for individual students are sometimes supplied free in primary schools, and several education departments produce monthly school magazines which are supplied free or at a nominal price. In primary schools (except in one State where textbooks are made available free to children in both government and non-government primary schools) and in secondary schools, textbooks must, however, be purchased by students. In several States, schools own stocks of textbooks which are hired to students, and in one State, secondary textbooks are sold at reduced prices. In four States certain textbook costs are subsidised for students attending government and non-government schools. The parent organisations, with the assistance of subsidies from the education departments, are usually responsible for providing equipment such as radios and television sets, film strip projectors, pianos, duplicators and, in particular, library books.

### **Visual aids**

Each of the State education departments has a visual education branch to handle the production and distribution of such materials. Film strips and posters are distributed free or at low costs. Films are held in central libraries and are requisitioned by schools as required for teaching purposes.

Some central libraries are able to provide copies of audio and videotape recordings. Commonwealth financial assistance under the Secondary Schools Libraries Programme is available to State education departments for a range of audio-visual equipment.

### Parent organisations

In Australia, where all government schools are administered by central departments, there is limited opportunity for local participation in education. Public interest is expressed through parents committees or organisations of parents and other citizens interested in supporting their local school. The Education Acts of all States provide for the formation of groups of this type, whose aims are to promote an interest in the school by bringing parents and teaching staff together, to help provide supplementary teaching aids and recreation materials, to foster the regular attendance of children at school, and to help find accommodation for teachers. In several States the general maintenance of school buildings, equipment and grounds is a statutory responsibility of the parent groups, costs being covered by government grants. Lunch canteen services at local schools are maintained by groups in some States. Parent groups have established school children's insurance schemes, operated through State Government insurance offices or private insurance companies. These schemes cover accidents to children which occur between the time of leaving home for school and returning home by the usual direct route. State-wide councils of federations of parent groups are associated in a federal body, the Australian Council of State School Organisations.

Many non-government schools also have parents associations, which may raise funds for special projects.

### Research

All State education departments have branches undertaking research directed towards departmental activities. The work of the research branches is concerned with such matters as curriculum content, new teaching methods, evaluation procedures, wastage rates and education statistics. Education research is also carried out by education research units, faculties and departments of education in the universities; departments of teacher education in colleges of advanced education; the Commonwealth Department of Education and Science and the Australian Council for Educational Research.

### Curriculum development

While State education departments are responsible for the development of the curricula followed in their schools, the Commonwealth is prepared to consider support for proposals in the field of curriculum development if they are put forward by more than one State. Two such proposals are at present receiving Commonwealth financial support. They are:

*Australian Science Education Project.* This project, which developed out of the Junior Secondary Science Project initiated by the Victorian, South Australian and Tasmanian Governments has been extended to all States. The Commonwealth will contribute \$750,000 and the States \$450,000 over the five-year period commencing in 1969.

*National Committee on Social Sciences Teaching.* This Committee was established in 1970 as a joint project between the Commonwealth and the States to examine goals and suggested desirable content for inclusion in the new social science curricula to suit Australian conditions.

The findings of the Advisory Committee on the teaching of Asian Languages and Cultures, a Committee set up by the Commonwealth in 1969, were made public in March 1971 by the tabling of the Committee's report in Parliament. The Committee's findings are being considered by the State and Commonwealth education authorities.

## Numbers of schools, teachers and students

The statistics which follow relate generally to schools providing education according to the primary or secondary school curricula of the various State education departments, or both, whether provided in government or non-government schools. Junior technical schools, correspondence schools, and schools in institutional homes, hospitals and similar establishments are included. Institutions providing only pre-school education, senior technical and agricultural colleges, evening schools, continuation classes, and institutions such as business colleges and coaching establishments are, as a rule, excluded.

School censuses are conducted annually at or about the beginning of August throughout all States and Territories of Australia. The numbers of students in the tables which follow refer to enrolments at the school census date. The numbers of schools and teachers refer to the position at dates



which vary from State to State and in some instances from year to year. While it has not been possible to present all figures on a uniform basis between States, continuity of the figures for any one State over the period of years shown has been maintained as far as possible.

### Schools, teachers and students

The statistics of government and non-government schools, teachers and students in 1971 and earlier years are shown in the following tables. For more detailed statistics, see *Schools* bulletin (reference No. 13 5).

### NUMBERS OF SCHOOLS, TEACHERS AND STUDENTS, BY CATEGORY OF SCHOOL STATES AND TERRITORIES, 1971

	Government schools	Non-government schools						Total	All schools
		Denominational							
		Church of England	Methodist	Presbyterian	Roman Catholic	Other	Undenominational		
SCHOOLS									
New South Wales	2,377	34	6	12	624	26	91	793	3,170
Victoria	2,197	33	4	11	477	28	18	571	2,768
Queensland	1,228	14	..	4	296	19	12	345	1,573
South Australia	631	10	4	2	122	23	8	169	800
Western Australia	598	9	3	2	169	10	7	200	798
Tasmania	239	4	1	2	49	6	1	63	302
Northern Territory	85	..	2	..	12	1	5	20	105
Australian Capital Territory	49	3	..	..	20	..	..	23	72
Australia—1971	7,404	107	20	33	1,769	113	142	2,184	9,588
1970	7,470	108	19	33	1,781	112	127	2,180	9,650
1969	7,549	110	18	34	1,784	107	121	2,174	9,723
1968	7,636	113	20	38	1,807	109	96	2,183	9,819
1967	7,698	113	20	38	1,818	105	92	2,186	9,884
TEACHERS(a)									
New South Wales p	34,971	991	195	377	6,790	151	590	9,093	44,064
Victoria	28,344	1,166	248	533	4,992	484	294	7,716	36,060
Queensland	12,815	354	..	52	2,597	209	250	3,462	16,277
South Australia	10,047	260	130	96	953	123	121	1,682	11,730
Western Australia	7,322	277	131	104	1,169	51	20	1,752	9,074
Tasmania	3,750	112	24	39	389	88	6	659	4,409
Northern Territory	723	..	22	..	74	11	5	(b)112	834
Australian Capital Territory	1,143	107	..	..	306	..	..	413	1,556
Australia p—1971	99,115	3,266	750	1,201	17,270	1,118	1,285	24,889	124,005
1970	96,085	3,152	741	1,214	16,577	1,057	1,215	23,956	120,041
1969	91,888	3,006	711	1,165	15,413	989	1,139	22,423	114,311
1968	87,559	2,942	693	1,171	15,002	964	1,063	21,835	109,394
1967	82,481	2,817	682	1,140	14,118	887	1,049	20,693	103,174
STUDENTS (SCHOOL CENSUS)									
New South Wales	771,392	14,508	3,040	5,744	189,501	2,529	6,873	222,195	993,587
Victoria	593,933	17,383	4,184	8,320	150,031	7,184	4,113	191,215	785,148
Queensland	299,876	5,720	..	988	75,287	4,106	4,618	90,719	390,595
South Australia	231,440	4,051	2,310	1,534	26,189	2,412	1,380	37,876	269,316
Western Australia	179,889	4,083	2,005	1,504	33,080	995	446	42,113	222,002
Tasmania	78,164	1,612	335	555	10,167	1,315	163	14,147	92,311
Northern Territory	15,168	..	435	..	2,235	214	37	2,921	18,089
Australian Capital Territory	26,709	1,653	..	..	8,235	..	..	9,888	36,597
Australia—1971	2,196,571	49,010	12,309	18,645	494,725	18,755	17,630	611,074	2,807,645
1970	2,160,177	48,315	12,266	18,664	493,849	18,007	16,955	608,056	2,768,233
1969	2,113,975	47,376	12,086	18,623	491,207	17,164	16,530	602,986	2,716,961
1968	2,054,808	46,741	12,055	18,634	490,818	16,704	15,951	600,903	2,655,711
1967	1,990,940	45,944	11,764	18,487	486,738	15,925	15,823	594,681	2,585,621

(a) Excludes teachers-in-training generally. Figures are full-time teachers plus part-time teachers expressed in equivalent full-time units. For basis of calculating equivalent full-time units, see footnote (b) to next table. (b) Excludes unqualified teachers and teaching assistants at mission schools.

## NUMBERS OF TEACHERS: STATES AND TERRITORIES, 1971(a)

	Government schools			Non-government schools			All schools		
	Part-time			Part-time			Part-time		
	Full-time	No.	Equiv. f.t.u. (b)	Full-time	No.	Equiv. f.t.u. (b)	Full-time	No.	Equiv. f.t.u. (b)
New South Wales p . . .	33,930	2,434	1,041	8,406	(c)2,041	687	42,336	4,475	1,728
Victoria . . .	26,037	(d)4,175	(d)2,307	7,159	1,646	557	33,196	5,821	2,864
Queensland . . .	12,815	(e)3	(e)	3,258	789	204	16,073	792	204
South Australia . . .	9,631	802	416	1,480	544	202	11,111	1,346	619
Western Australia . . .	7,153	427	169	1,624	451	128	8,777	878	297
Tasmania . . .	3,625	208	79	582	184	77	4,207	392	156
Northern Territory(f) . . .	711	24	12	109	6	3	820	30	14
Australian Capital Territory	1,096	92	47	370	(c)112	43	1,466	204	90
Australia—1971 . . .	p94,998	p8,165	p4,071	22,988	5,773	1,901	p117,986	p13,938	p5,973
1970 . . .	92,725	6,851	3,360	22,187	5,963	1,769	114,912	12,814	5,129
1969 . . .	89,086	5,867	2,802	20,956	5,000	1,467	110,042	10,867	4,269
1968 . . .	84,922	5,579	2,637	20,467	5,052	1,368	105,389	10,631	4,005
1967 . . .	80,199	5,203	2,282	19,468	4,828	1,225	99,667	10,031	3,507

(a) Excludes teachers-in-training generally. (b) The methods used for calculating equivalent full-time units of part-time teaching vary from State to State, between government and non-government schools, and between primary and secondary schools within States. For most schools the information is based on either the total hours worked or total number of class periods taken in a week by part-time teachers, in relation to the normal hours worked or periods taken by full-time teachers. (c) Visiting teachers who attend more than one school are counted as part-time in each school. (d) If a full-time teacher teaches both senior and junior technical school pupils, he is counted as part-time in these statistics (which include junior technical, but not senior technical schools), if his teaching load in the junior school is less than 75 per cent. (e) Since 1969, the Queensland Education Department has employed only full-time teachers. The part-time teacher statistics shown refer to government teachers employed by the Department of Aboriginal and Island Affairs. (f) Unqualified teachers and teaching assistants at mission schools are excluded.

## GOVERNMENT AND NON-GOVERNMENT SCHOOLS: STUDENTS, BY SEX, STATES AND TERRITORIES, 1971

(School census enrolment)

	Government schools			Non-government schools			All schools		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
New South Wales	402,903	368,489	771,392	112,045	110,150	222,195	514,948	478,639	993,587
Victoria . . .	312,203	281,730	593,933	93,546	97,669	191,215	405,749	379,399	785,148
Queensland . . .	156,454	143,422	299,876	45,684	45,035	90,719	202,138	188,457	390,595
South Australia . . .	121,026	110,414	231,440	18,707	19,169	37,876	139,733	129,583	269,316
Western Australia	94,644	85,245	179,889	20,040	22,073	42,113	114,684	107,318	222,002
Tasmania . . .	40,784	37,380	78,164	6,754	7,393	14,147	47,538	44,773	92,311
Northern Territory	7,822	7,346	15,168	1,460	1,461	2,921	9,282	8,807	18,089
Australian Capital Territory . . .	13,657	13,052	26,709	5,238	4,650	9,888	18,895	17,702	36,597
Australia—1971 . . .	1,149,493	1,047,078	2,196,571	303,474	307,600	611,074	1,452,967	1,354,678	2,807,645
1970 . . .	1,130,925	1,029,252	2,160,177	301,935	306,121	608,056	1,432,860	1,335,373	2,768,233
1969 . . .	1,107,089	1,006,886	2,113,975	299,095	303,891	602,986	1,406,184	1,310,777	2,716,961
1968 . . .	1,077,012	977,796	2,054,808	297,433	303,470	600,903	1,374,445	1,281,266	2,655,711
1967 . . .	1,044,464	946,476	1,990,940	294,045	300,636	594,681	1,338,509	1,247,112	2,585,621

GRADES AND EXAMINATIONS IN THE PRIMARY AND SECONDARY SCHOOL SYSTEMS IN EACH STATE AND TERRITORY, 1971

The grade terminology follows, as nearly as possible, that used in government primary and high schools in each State in 1971. It is not necessarily used in all types of schools. The grades have been written in to agree with the age-scale shown on the diagram, in order to indicate differences in age-grade placement. The age-grade placement is indicated by the age of the student at the beginning of the year. The diagram should not be taken as a comparison of academic standards of grades between States. For a more detailed presentation of the systems operating in each State, reference should be made to diagrams etc. appearing in the annual reports of State Education Departments.

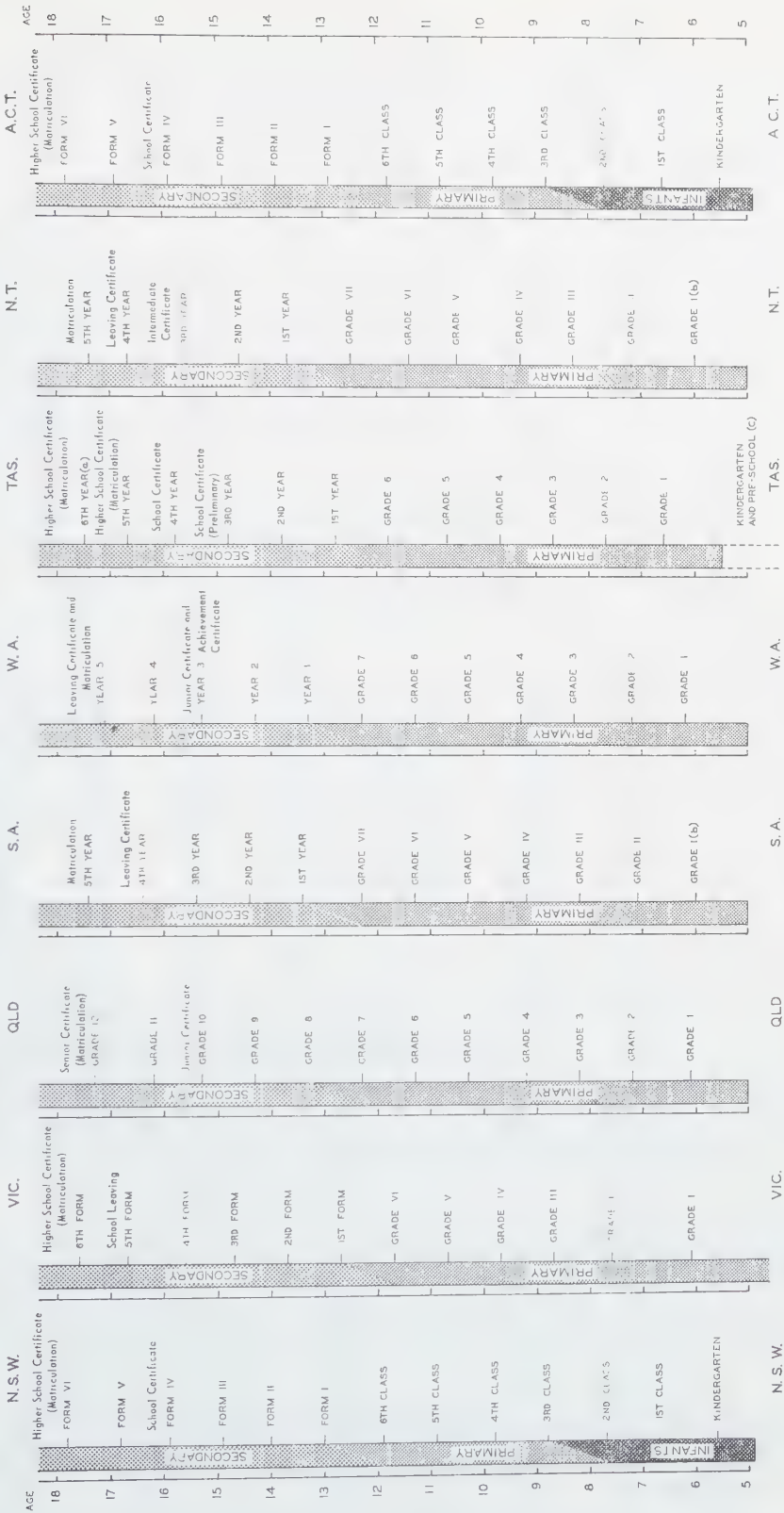


PLATE 36

a. In Tasmania many students study for the Higher School Certificate over a two year period.  
b. Preparatory grades are attached to some schools in South Australia and the Northern Territory.  
c. In Tasmania, many students attend two years pre-school, one year Kindergarten grade, or one year of both, before entering grade 1.

GOVERNMENT AND NON-GOVERNMENT SCHOOLS: STUDENTS, BY AGE AND SEX  
AUSTRALIA, 1971

(School census enrolment)

Age last birthday (years)	Government schools			Non-government schools			All schools		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Under 6	80,320	75,876	156,196	20,002	20,263	40,265	100,322	96,139	196,461
6	97,734	91,896	189,630	23,935	23,978	47,913	121,669	115,874	237,543
7	102,106	95,196	197,302	25,099	25,160	50,259	127,205	120,356	247,561
8	103,858	97,239	201,097	25,253	25,595	50,848	129,111	122,834	251,945
9	105,429	98,296	203,725	25,952	26,475	52,427	131,381	124,771	256,152
10	105,367	97,820	203,187	26,204	27,030	53,234	131,571	124,850	256,421
11	102,283	95,239	197,522	26,155	26,861	53,016	128,438	122,100	250,538
12	99,717	92,517	192,234	26,452	27,904	54,356	126,169	120,421	246,590
13	97,698	90,051	187,749	25,613	27,563	53,176	123,311	117,614	240,925
14	94,007	86,161	180,168	24,704	26,414	51,118	118,711	112,575	231,286
15	76,372	65,683	142,055	22,280	23,387	45,667	98,652	89,070	187,722
16	48,824	38,412	87,236	16,914	16,122	33,036	65,738	54,534	120,272
17	25,847	18,020	43,867	11,176	8,986	20,162	37,023	27,006	64,029
18	8,301	4,065	12,366	3,188	1,564	4,752	11,489	5,629	17,118
19 and over	1,501	477	1,978	547	298	845	2,048	775	2,823
Total(a)	1,149,364	1,046,948	2,196,312	303,474	307,600	611,074	1,452,838	1,354,548	2,807,386

(a) Excludes the age distribution of 259 students at Government schools in New South Wales.

## SCHOOLS: STUDENTS, BY AGE, STATES AND TERRITORIES, 1971

(School census enrolment)

Age last birthday (years)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Under 6	77,656	60,300	19,005	19,249	8,749	5,820	2,559	3,123	196,461
6	81,647	66,480	34,539	22,261	19,984	7,560	1,895	3,177	237,543
7	86,090	68,006	36,568	22,751	20,865	8,193	1,842	3,246	247,561
8	87,184	68,971	37,202	23,541	21,766	8,272	1,772	3,327	251,945
9	89,741	69,350	38,088	23,825	21,492	8,591	1,741	3,324	256,152
10	89,572	69,439	37,577	24,531	21,625	8,748	1,685	3,244	256,421
11	87,172	67,861	37,132	23,912	21,287	8,615	1,484	3,075	250,538
12	85,990	66,531	36,777	23,709	20,925	8,259	1,339	3,060	246,590
13	83,835	65,704	35,644	23,139	20,315	8,239	1,250	2,799	240,925
14	80,371	63,454	33,971	22,717	19,288	7,758	1,061	2,666	231,286
15	66,118	54,277	23,747	19,235	14,436	6,793	804	2,312	187,722
16	42,591	38,855	12,840	12,995	7,354	3,404	466	1,767	120,272
17	25,803	20,310	5,953	5,556	3,559	1,561	131	1,156	64,029
18	8,524	4,707	1,305	1,441	326	392	49	374	17,118
19 and over	1,034	903	247	454	31	106	11	37	2,823
Total(a)	993,328	785,148	390,595	269,316	222,002	92,311	18,089	36,597	2,807,386

(a) See footnote (a) to previous table.

## Universities

Applicants for enrolment in Australian universities are required to have reached matriculation standard, usually after five or six years of secondary education. Each university has its own regulations for matriculation, specifying the number and combination of subjects to be passed or the level of performance required. Students entering the universities have the choice of undergraduate study in various faculties. All universities also provide post-graduate courses of study.

There are fifteen operative universities in Australia. The James Cook University of North Queensland, which was formerly the University College of Townsville, was raised to the status of a full university in 1970. Details of the courses offered by these universities, together with background information on their teaching and research programmes, and a summary of general university development in recent years, is given in Year Book No. 55, pages 507-9. By 1975, two new universities will be taking students, the Griffith University in Queensland and the Murdoch University in Western Australia. In addition, the Wollongong University College will become an autonomous university in 1975.

The following tables show statistics of university staff, student enrolments, assisted students, degrees conferred, diplomas and certificates awarded, income and expenditure. The first table gives summary statistics for each university and branch whereas the other tables provide State figures only. Reference should also be made to the annual publications *University Statistics, Parts 1-3* for further details.



# UNIVERSITIES: SUMMARY STUDENT AND STAFF STATISTICS FOR EACH UNIVERSITY AND BRANCH, 1971

	Students enrolled(a) for			All students	Teaching staff(b)		Non-teaching staff	
	Higher degree courses	Bachelor degree courses	Non-degree courses		Full-time	Part-time(c)	Full-time	Part-time(d)
New South Wales—								
University of Sydney . . . . .	2,501	13,165	1,348	17,014	1,030	1,322	2,165	93
University of New South Wales—								
Kensington . . . . .	1,860	12,094	1,601	15,555	950	903	1,795	92
Wollongong University College . . . . .	77	1,190	70	1,337	85	30	105	5
Broken Hill Division . . . . .	7	84	16	107	13	10	31	1
Duntroon . . . . .	..	254	..	254	55	..	2	..
Jervis Bay . . . . .	..	25	..	25	(e)	(e)	(e)	(e)
Total University of New South Wales . . . . .	1,944	13,647	1,687	17,278	1,103	942	1,933	98
University of New England . . . . .	316	4,693	608	5,617	346	100	738	40
University of Newcastle . . . . .	287	3,071	212	3,570	215	181	249	12
Macquarie University . . . . .	521	4,383	163	5,067	335	228	485	23
Total New South Wales . . . . .	5,569	38,959	4,018	48,546	3,029	2,773	5,570	266
Victoria—								
University of Melbourne . . . . .	1,762	11,784	1,404	14,950	926	1,329	1,836	41
Monash University . . . . .	1,098	9,003	933	11,034	766	431	1,553	213
La Trobe University . . . . .	203	2,551	258	3,012	249	97	474	79
Total Victoria . . . . .	3,063	23,338	2,595	28,996	1,941	1,856	3,862	332
Queensland—								
University of Queensland . . . . .	1,084	15,592	809	17,485	941	747	1,842	37
James Cook University of North Queensland . . . . .	124	1,315	25	1,464	140	66	229	2
Total Queensland . . . . .	1,208	16,907	834	18,949	1,081	813	2,071	39
South Australia—								
University of Adelaide . . . . .	935	6,980	615	8,530	569	631	1,054	163
Flinders University . . . . .	136	1,842	174	2,152	180	126	335	63
Total South Australia . . . . .	1,071	8,822	789	10,682	749	757	1,389	226
Western Australia—								
University of Western Australia . . . . .	614	7,013	728	8,355	495	592	973	109
Tasmania—								
University of Tasmania . . . . .	200	2,791	453	3,444	220	260	367	33
Australian Capital Territory—								
Australian National University—								
Institute of Advanced Studies . . . . .	546	..	6	552	..	..	1,282	..
School of General Studies . . . . .	187	3,859	224	4,270	323	56	347	..
Total Australian Capital Territory . . . . .	733	3,859	(f)212	(f)4,804	(g)327	(g)85	(h)2,477	(h)16
Total All Universities . . . . .	12,458	101,689	9,629	123,776	7,840	7,136	16,709	1,022

(a) Statistics shown refer to net enrolments, i.e. gross enrolments adjusted for students enrolled for more than one course. If a student is enrolled for two or more courses at different levels, the adjustment is made against the lesser level.  
(b) Excludes research only staff. (c) Expressed as units of 100 teaching hours per annum. (d) Equivalent full-time units. (e) No university staff are attached to the R.A.N. College, Jervis Bay. (f) Adjusted for students enrolled at both the Institute and the School. (g) Includes 4 full-time and 29 part-time positions not allocated to either the Institute or the School. (h) Includes 848 full-time and 16 part-time positions not allocated to either the Institute or the School.

## University teaching and research staff

### UNIVERSITIES: TEACHING AND RESEARCH STAFF(a), 1971

	Full-time teaching staff(b)				Total	Part-time teaching staff(d)	Full-time research staff(e)	Part-time research staff(e)(f)
	Professors	Associate professors and readers	Senior lecturers and lecturers	Assistant lecturers, demonstrators, etc.(c)				
New South Wales . . . . .	296	298	1,666	770	3,029	2,773	269	18
Victoria . . . . .	211	171	1,114	445	1,941	1,856	193	23
Queensland . . . . .	90	112	567	313	1,081	813	196	19
South Australia . . . . .	95	74	455	125	749	757	77	8
Western Australia . . . . .	60	51	279	105	495	592	67	2
Tasmania . . . . .	31	24	118	47	220	260	11	2
Australian Capital Territory . . . . .	39	36	198	54	327	85	572	..
Australia—1971 . . . . .	821	766	4,395	1,858	7,840	7,136	1,385	72
1970 . . . . .	799	714	4,130	1,724	7,367	6,845	1,345	54
1969 . . . . .	777	638	4,011	1,593	7,018	6,423	1,268	55
1968 . . . . .	721	582	3,706	1,479	6,487	6,264	1,155	45
1967 . . . . .	663	547	3,497	1,338	6,044	5,337	995	45

(a) Occupied positions. (b) Excludes research only staff which are shown separately. (c) Includes tutors and teaching fellows. (d) Expressed in units of 100 teaching hours per annum. (e) Excludes research technical staff. (f) In equivalent full-time units of 35 hour. per week.

University students enrolled

UNIVERSITIES: STUDENTS ENROLLED(a), 1971

	Degree courses		Diploma courses		Certi- ficate courses	Other courses (b)	Adjusted total(c)
	Higher degree	Bachelor degree	Post- graduate	Sub- graduate			
New South Wales . . . . .	5,578	39,124	2,320	16	401	1,380	48,546
Victoria . . . . .	3,065	24,102	1,458	273	..	1,024	28,996
Queensland . . . . .	1,208	16,907	366	41	22	405	18,949
South Australia . . . . .	1,071	8,842	517	61	..	275	10,682
Western Australia . . . . .	614	7,019	388	..	..	353	8,355
Tasmania . . . . .	200	2,791	222	13	32	186	3,444
Australian Capital Territory . . . . .	733	3,859	..	..	..	230	4,804
<b>Australia—1971 . . . . .</b>	<b>12,469</b>	<b>102,644</b>	<b>5,271</b>	<b>404</b>	<b>455</b>	<b>3,853</b>	<b>123,776</b>
1970 . . . . .	11,549	97,357	4,159	990	379	3,531	116,778
1969 . . . . .	10,564	90,738	4,229	1,204	635	3,618	109,662
1968 . . . . .	9,230	84,317	3,596	1,625	459	3,662	101,537
1967 . . . . .	8,562	78,825	3,075	2,093	495	3,555	95,380

(a) Statistics shown refer to gross enrolments, i.e. students enrolled for two or more courses are included in each course for which they are enrolled. (b) Includes post-doctoral courses, master preliminary courses and students enrolled in one or more subjects of a normal course without having been admitted to the course as a whole. (c) Adjusted for students enrolled for more than one course. Where course levels differ, the adjustment is made against the lesser level.

Of the students enrolled in 1971, 84,800 were males and 38,976 were females.

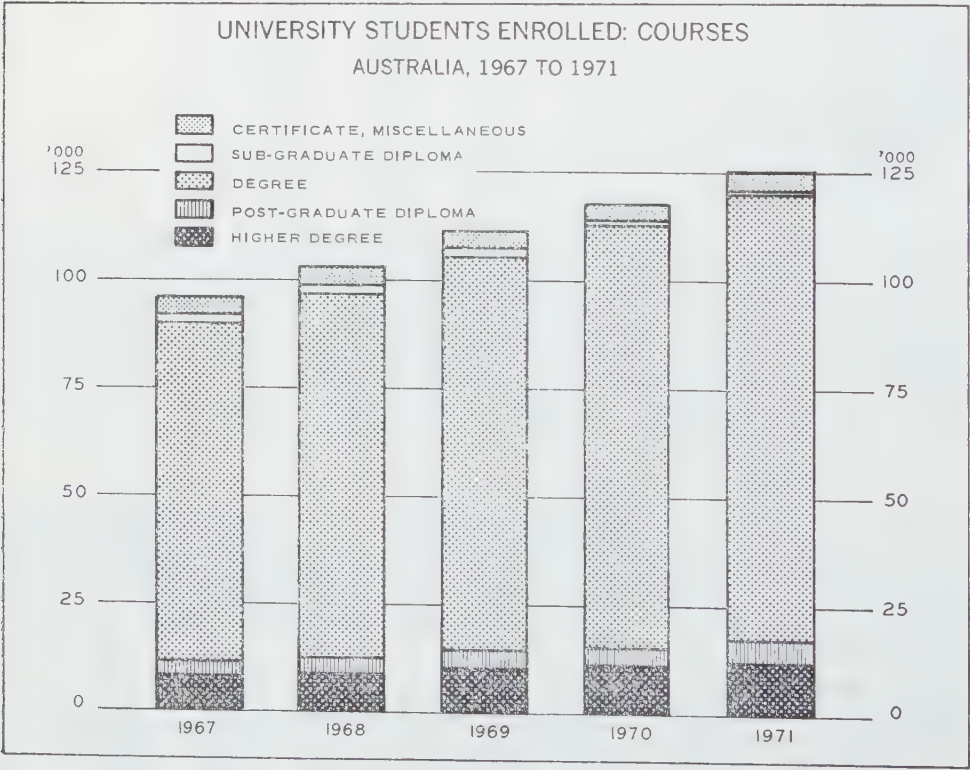


PLATE 37

## University students commencing courses

## UNIVERSITIES: ENROLMENTS OF STUDENTS COMMENCING HIGHER DOCTOR, PH.D., MASTER AND BACHELOR DEGREE COURSES FOR THE FIRST TIME IN ANY AUSTRALIAN UNIVERSITY, 1971(a)

	<i>Higher doctor degree courses</i>	<i>Ph.D. degree courses</i>	<i>Master degree courses</i>	<i>Bachelor degree courses</i>
New South Wales . . . .	14	236	1,273	10,192
Victoria(b) . . . .	1	103	318	6,267
Queensland . . . .	10	131	191	4,052
South Australia . . . .	16	105	235	2,281
Western Australia . . . .	..	72	118	1,934
Tasmania . . . .	..	18	32	787
Australian Capital Territory . .	..	131	86	920
Australia—1971 . . . .	41	796	2,253	26,433
1970 . . . .	27	856	1,990	26,305
1969 . . . .	26	849	1,974	25,518

(a) Statistics shown refer to gross enrolments, i.e. students enrolled for two or more courses are included in each course for which they are enrolled. (b) Statistics for the University of Melbourne refer to students enrolling for the first time at that university.

Of students commencing higher and bachelor degree courses in 1971, 18,903 were males and 10,620 were females.

## Full-time and other university students by level of course

## UNIVERSITIES: FULL-TIME AND PART-TIME STUDENTS ENROLLED BY COURSE LEVEL AND SEX OF STUDENT(a), 1967 TO 1971

<i>Level of course</i>	<i>Males</i>					<i>Females</i>				
	1967	1968	1969	1970	1971	1967	1968	1969	1970	1971
FULL-TIME										
Higher degree . . . .	3,479	3,413	3,756	3,963	4,293	609	591	703	783	889
Bachelor degree . . . .	37,161	39,597	42,469	45,374	47,311	14,680	16,674	18,634	21,137	23,863
Post-graduate diploma . .	794	861	911	968	1,148	936	1,098	1,276	1,053	1,731
Sub-graduate diploma . .	296	361	400	145	67	791	749	800	424	153
Certificate . . . .	40	242	438	255	368	36	39	67	36	46
Other . . . .	257	250	244	231	318	197	219	248	239	309
Total enrolments . .	42,027	44,724	48,218	50,936	53,505	17,249	19,370	21,728	23,672	26,991
Number of students(b) .	41,404	43,911	47,285	50,290	52,829	16,921	18,824	21,063	23,355	26,608
PART-TIME(c)										
Higher degree . . . .	3,727	4,345	5,073	5,685	6,032	747	881	1,032	1,118	1,255
Bachelor degree . . . .	19,995	20,508	21,556	22,118	22,232	6,989	7,538	8,079	8,728	9,238
Post-graduate diploma . .	915	1,119	1,437	1,492	1,561	430	518	605	646	831
Sub-graduate diploma . .	625	453	382	264	141	381	313	210	157	43
Certificate . . . .	393	131	110	75	29	26	47	20	13	12
Other . . . .	2,115	2,175	2,192	2,089	2,154	1,002	1,018	934	972	1,072
Total enrolments . .	27,770	28,731	30,750	31,723	32,149	9,575	10,315	10,880	11,634	12,451
Number of students(b) .	27,575	28,559	30,537	31,557	31,971	9,480	10,243	10,777	11,576	12,368
ALL ENROLMENTS										
Higher degree . . . .	7,206	7,758	8,829	9,648	10,325	1,356	1,472	1,735	1,901	2,144
Bachelor degree . . . .	57,156	60,105	64,025	67,492	69,543	21,669	24,212	26,713	29,865	33,101
Post-graduate diploma . .	1,709	1,980	2,348	2,460	2,709	1,366	1,616	1,881	1,699	2,562
Sub-graduate diploma . .	921	814	782	409	208	1,172	1,062	1,010	581	196
Certificate . . . .	433	373	548	330	397	62	86	87	49	58
Other . . . .	2,372	2,425	2,436	2,320	2,472	1,199	1,237	1,182	1,211	1,381
Total enrolments . .	69,797	73,455	78,968	82,659	85,654	26,824	29,685	32,608	35,306	39,442
Number of students(b) .	68,979	72,470	77,822	81,847	84,800	26,401	29,067	31,840	34,931	38,976

(a) Statistics for 1967 refer to the situation at 31 July; those for 1968 and 1969 to 30 June; and those for 1970 and 1971 refer to 30 April. (b) Adjusted for students enrolled for more than one course. (c) Includes external students.

## Assistance to university students

The Commonwealth Government, through the Commonwealth Scholarships Board, grants undergraduate and post-graduate scholarships to university students. Details of the Commonwealth Scholarship Scheme are given on page 654. Commonwealth, State and local governments also award cadetships and other assistance to their employees. Foreign students are assisted by the Commonwealth Government under arrangements such as the Colombo Plan. The universities themselves grant exhibitions and scholarships as well as special assistance to teachers, etc.

## UNIVERSITIES: SOURCE OF STUDENT ASSISTANCE, 1971

	<i>Source of assistance</i>					<i>Type of course</i>	
	<i>Common-wealth Government</i>	<i>State Governments</i>	<i>Universities</i>	<i>Other</i>	<i>Adjusted total(a)</i>		
						<i>Higher degree</i>	<i>Other</i>
New South Wales . . .	14,101	5,311	13,627	819	28,588	2,522	31,336
Victoria . . .	10,968	6,007	9,098	259	21,040	1,834	24,498
Queensland . . .	5,269	793	1,396	185	7,643	619	7,024
South Australia . . .	3,794	2,524	1,334	132	7,716	812	6,972
Western Australia . . .	2,548	3,096	237	132	6,013	388	5,625
Tasmania . . .	1,070	678	112	112	1,842	114	1,858
Australian Capital Territory . . .	1,456	402	598	29	2,485	608	1,877
<b>Australia—1971 . . .</b>	<b>39,206</b>	<b>18,811</b>	<b>26,402</b>	<b>1,668</b>	<b>75,327</b>	<b>6,897</b>	<b>79,190</b>
1970 . . .	35,008	17,641	22,979	1,607	67,334	6,537	70,698
1969 . . .	32,425	16,134	22,400	1,983	63,110	6,269	66,673
1968 . . .	29,355	14,589	20,392	1,651	57,417	5,473	60,514
1967 . . .	27,320	15,499	16,204	1,813	48,728	5,145	55,691

(a) Adjusted for students receiving assistance from more than one source. Statistics from 1968 onwards are also adjusted for students receiving assistance for a higher degree and another course.

## University degrees conferred, and diplomas and certificates awarded

UNIVERSITIES: DEGREES CONFERRED, AND DIPLOMAS AND CERTIFICATES AWARDED  
YEAR ENDED 30 JUNE 1971(a)

	<i>Degrees</i>				<i>Diplomas</i>		
	<i>Higher doctor</i>	<i>Ph. D.</i>	<i>Master</i>	<i>Bachelor</i>	<i>Post-graduate</i>	<i>Sub-graduate</i>	<i>Certificates</i>
New South Wales . . .	24	220	593	5,113	1,127	13	370
Victoria . . .	16	146	271	4,201	694	135	..
Queensland . . .	4	63	61	2,104	257	63	48
South Australia . . .	13	86	59	1,697	221	89	..
Western Australia . . .	1	45	39	910	169	..	..
Tasmania . . .	1	17	5	474	83	2	49
Australian Capital Territory . . .	..	81	39	495	..	..	..
<b>Australia—1971 . . .</b>	<b>59</b>	<b>658</b>	<b>1,067</b>	<b>14,994</b>	<b>2,551</b>	<b>302</b>	<b>467</b>
1970 . . .	54	609	888	13,484	2,324	328	550
1969 . . .	53	490	811	13,360	2,237	406	673
1968 . . .	31	(13)475	(11)740	(15)11,576	1,939	(9)557	(24)471
1967 . . .	40	327	635	10,393	1,454	445	570

(a) Statistics for 1967 refer to the year ended 31 July; those for 1968 onwards refer to the year ended 30 June. Degrees conferred, and diplomas and certificates awarded in July 1967 are therefore included in 1967 and 1968 figures. The numbers involved are shown in brackets.



## University income and expenditure

UNIVERSITIES: INCOME, 1970  
(\$'000)

	Government grants(a)		Other income			Total income
	Cwlth Government grants	State Government grants	Donations and endowments(b)	Student fees(c)	Other income	
New South Wales . . . . .	32,078	35,291	4,728	10,215	4,747	87,058
Victoria . . . . .	22,011	24,363	2,351	7,011	3,609	59,344
Queensland . . . . .	8,917	10,080	2,279	4,288	690	26,255
South Australia . . . . .	9,034	10,269	795	2,027	1,113	23,237
Western Australia . . . . .	5,901	5,260	1,215	2,145	876	15,396
Tasmania . . . . .	2,332	2,534	83	882	248	6,079
Australian Capital Territory . . . . .	28,266	..	382	800	2,379	31,826
<b>Australia—1970 . . . . .</b>	<b>108,539</b>	<b>87,796</b>	<b>11,832</b>	<b>27,368</b>	<b>13,662</b>	<b>249,195</b>
1969 . . . . .	93,887	83,285	11,784	22,825	11,359	223,140
1968 . . . . .	88,788	72,848	11,984	20,919	9,749	204,289
1967 . . . . .	79,872	64,304	10,461	19,145	8,597	182,379
1966 . . . . .	71,012	65,509	10,781	16,653	7,053	171,008

(a) Includes funds expended by various government departments and other bodies in respect of universities but not controlled by the universities. (b) In the case of endowments, only income from property and other investment of these endowments is included. The treatment of donations depends on the terms of the gift, etc. When the capital sum is specified to be expended over several years, only the portion of the capital sum allocated to each year is shown as income in that year, but if the capital sum is available for spending without limitation as to time, the full amount is recorded as income in the year it is received, irrespective of whether it is spent in that year or not. The capital value of land and buildings donated to the universities is not recorded as income, unless these properties are sold, in which case the amounts realised are included. (c) Excludes fees collected on behalf of student unions, adult education fees, ad hoc course fees and public examination fees.

UNIVERSITIES: EXPENDITURE, 1970  
(\$'000)

	Teaching and research	Administration and general overhead	Libraries	Buildings, premises, grounds	Sundry auxiliary expenditure	Total expenditure
New South Wales . . . . .	51,506	7,809	4,106	16,351	4,600	84,371
Victoria . . . . .	35,903	5,141	3,106	13,851	3,732	61,732
Queensland . . . . .	17,844	1,957	1,345	4,736	944	26,827
South Australia . . . . .	14,375	1,557	1,228	5,559	540	23,259
Western Australia . . . . .	8,849	1,154	663	2,654	1,034	14,353
Tasmania . . . . .	3,970	510	397	1,044	254	6,175
Australian Capital Territory . . . . .	19,432	2,435	1,113	6,411	2,415	31,806
<b>Australia—1970 . . . . .</b>	<b>151,879</b>	<b>20,563</b>	<b>11,957</b>	<b>50,606</b>	<b>13,518</b>	<b>248,524</b>
1969 . . . . .	124,806	17,672	10,375	48,134	12,046	213,034
1968 . . . . .	119,394	15,563	9,129	51,823	11,737	207,645
1967 . . . . .	106,386	13,298	7,915	48,061	9,056	184,714
1966 . . . . .	93,410	11,915	6,857	42,498	7,779	162,459

### Colleges of advanced education

The Committee on the Future of Tertiary Education in Australia recommended that interim capital grants be made by both the States and the Commonwealth to twelve specified institutions in five States during 1965-66 preliminary to an arrangement for the expansion and development of tertiary education outside the universities. This recommendation was accepted by all governments, and the Commonwealth established the Commonwealth Advisory Committee on Advanced Education to advise it on the continued development of the colleges which provide training with a vocational emphasis, as distinct from the academic education provided by the universities.

In some States the colleges are being developed from existing technological institutions, but new colleges are also being established. The diploma-awarding schools or sections of technical institutions are in the process of being separated from the trade, certificate and other sections of technical education, and of being developed as colleges of advanced education which are now receiving Commonwealth financial assistance.

Many colleges cater for a number of vocations in fields such as accountancy, architecture, art, applied sciences, building, business administration, data processing, domestic science, engineering, librarianship, medical laboratory technology, metallurgy, nutrition, pharmacy, and textile sciences. Provision has been made for teacher education to be conducted in a number of these multi-purpose colleges. Other colleges are specialist institutions, such as agricultural colleges, art schools, conservatoria of music, schools of physiotherapy, occupational therapy and speech therapy/science, and colleges offering courses in forestry, horticulture and nursing administration.

Administrative changes have taken place in the States to co-ordinate the activities of colleges of advanced education. In New South Wales, an Advanced Education Board has been established; in Victoria, the co-ordinating powers of the Victoria Institute of Colleges have been strengthened; a Board of Advanced Education has been established in both Queensland and South Australia; Tasmania has a Council of Advanced Education. In some States provision is also being made for co-ordination of all tertiary education, notably through the Higher Education Authority in New South Wales, the Tertiary Education Commission in Western Australia, and the Joint Consultative Council in Tasmania.

An Australian Council on Awards in Advanced Education has been established by joint action of the six States and the Commonwealth. One of the functions of the Council is to promote consistency throughout Australia in the nomenclature and standards used for awards in advanced education. It aims to do this by consultation between the States and Commonwealth accrediting agencies in the field of advanced education.

Further information about the development of colleges of advanced education can be found in the reports of the Australian Commission on Advanced Education which replaced the former body, the Commonwealth Advisory Committee on Advanced Education, *see* page 656; in particular the First report, 1967-69, the Second Report, 1970-72, and the Third Report, 1973-75. Details of the maximum Commonwealth grants for the development of the colleges are given on page 659.

The following statistics refer to the operative institutions listed in the appropriate States Grants Advanced Education Act as colleges of advanced education and the Canberra College of Advanced Education.

#### COLLEGES OF ADVANCED EDUCATION: TOTAL ENROLMENTS, BY TYPE OF ENROLMENT AND FIELD OF STUDY, STATES AND A.C.T., 1971

Field of study	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Australia		
								Males	Females	Persons
FULL-TIME STUDENTS										
Agriculture . . . . .	293	263	287	97	59	..	..	930	69	999
Applied sciences . . . . .	71	1,178	430	121	227	..	129	1,849	307	2,156
Art and design . . . . .	294	1,343	99	363	148	135	..	1,009	1,373	2,382
Building, surveying and architecture . . . . .	59	569	..	174	275	52	..	997	132	1,129
Commercial and business studies . . . . .	289	2,610	259	282	434	25	160	3,198	861	4,059
Engineering and technology . . . . .	133	3,233	527	378	417	5	..	4,668	25	4,693
Liberal studies . . . . .	12	359	..	104	266	..	111	347	505	852
Music . . . . .	289	..	73	..	..	42	..	93	311	404
Para-medical . . . . .	552	1,050	143	247	303	57	..	570	1,782	2,352
Teacher education . . . . .	411	..	..	..	..	293	144	220	628	848
Total enrolments —1971	2,403	10,605	1,818	1,766	2,129	609	544	13,881	5,993	19,874
1970	1,881	8,792	1,384	1,471	1,824	238	228	11,378	4,440	15,818
Number of students —1971	2,403	10,605	1,818	1,766	2,129	609	544	13,881	5,993	19,874
(a)1970	1,871	8,783	1,384	1,471	1,824	238	228	11,366	4,433	15,793

COLLEGES OF ADVANCED EDUCATION: TOTAL ENROLMENTS, BY TYPE OF ENROLMENT  
AND FIELD OF STUDY, STATES AND A.C.T., 1971—continued

Field of study	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Australia		
								Males	Females	Persons
PART-TIME STUDENTS										
Agriculture . . . . .	..	29	3	..	..	..	..	28	4	32
Applied sciences . . . . .	353	1,430	249	150	315	69	373	2,639	300	2,939
Art and design . . . . .	158	616	18	71	203	26	..	656	436	1,092
Building, surveying and architecture . . . . .	388	535	401	238	186	22	..	1,711	59	1,770
Commercial and business studies . . . . .	1,380	4,126	823	1,316	1,276	413	456	9,105	685	9,790
Engineering and technology . . . . .	963	2,604	529	525	563	203	..	5,376	11	5,387
Liberal studies . . . . .	10	726	..	86	351	31	216	720	700	1,420
Music . . . . .	5	..	..	..	..	9	..	6	8	14
Para-medical . . . . .	82	330	81	90	86	53	..	291	431	722
Teacher education . . . . .	..	..	..	..	..	..	44	8	36	44
Total enrolments —1971	3,339	10,396	2,104	2,476	2,980	826	1,089	20,540	2,670	23,210
1970	2,829	9,775	1,712	1,972	2,748	902	752	18,481	2,209	20,690
Number of students —1971	3,339	10,396	2,104	2,476	2,980	826	1,089	20,540	2,670	23,210
(a) 1970	2,829	9,747	1,712	1,972	2,748	896	752	18,449	2,207	20,656

## CORRESPONDENCE STUDENTS

Agriculture . . . . .	..	..	..	..	1	..	..	1	..	1
Applied sciences . . . . .	..	115	..	..	46	..	..	130	31	161
Art and design . . . . .	..	1	..	..	44	..	..	28	17	45
Building, surveying and architecture . . . . .	..	38	..	..	7	..	..	41	4	45
Commercial and business studies . . . . .	94	189	..	..	321	..	..	557	47	604
Engineering and technology . . . . .	..	117	..	..	16	..	..	129	4	133
Liberal studies . . . . .	..	9	..	..	129	..	..	96	42	138
Music . . . . .	..	..	..	..	..	..	..	..	..	..
Para-medical . . . . .	..	255	..	..	2	..	..	102	155	257
Teacher education . . . . .	..	..	..	..	..	..	..	..	..	..
Total enrolments —1971	94	724	..	..	566	..	..	1,084	300	1,384
1970	..	730	12	..	442	..	..	957	227	1,184
Number of students —1971	94	724	..	..	566	..	..	1,084	300	1,384
(a) 1970	..	716	12	..	442	..	..	944	226	1,170

## ALL STUDENTS

Agriculture . . . . .	293	292	290	97	60	..	..	959	73	1,032
Applied sciences . . . . .	424	2,723	679	271	588	69	502	4,618	638	5,256
Art and design . . . . .	452	1,960	117	434	395	161	..	1,693	1,826	3,519
Building, surveying and architecture . . . . .	447	1,142	401	412	468	74	..	2,749	195	2,944
Commercial and business studies . . . . .	1,763	6,925	1,082	1,598	2,031	438	616	12,860	1,593	14,453
Engineering and technology . . . . .	1,096	5,954	1,056	903	996	208	..	10,173	40	10,213
Liberal studies . . . . .	22	1,094	..	190	746	31	327	1,163	1,247	2,410
Music . . . . .	294	..	73	..	..	51	..	99	319	418
Para-medical . . . . .	634	1,635	224	337	391	110	..	963	2,368	3,331
Teacher education . . . . .	411	..	..	..	..	293	188	228	664	892
Total enrolments —1971	5,836	21,725	3,922	4,242	5,675	1,435	1,633	35,505	8,963	44,468
1970	4,710	19,297	3,108	3,443	5,014	1,140	980	30,816	6,876	37,692
Number of students —1971	5,836	21,725	3,922	4,242	5,675	1,435	1,633	35,505	8,963	44,468
(a) 1970	4,700	19,246	3,108	3,443	5,014	1,134	980	30,759	6,866	37,625

(a) Adjusted for students enrolled for more than one advanced level course.

COLLEGES OF ADVANCED EDUCATION: FIRST ENROLMENTS  
BY FIELD OF STUDY, STATES AND A.C.T., 1971

Field of study	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Australia		
								Males	Females	Persons
Agriculture . . . . .	170	140	143	55	38	..	..	496	50	546
Applied sciences . . . . .	168	912	310	103	215	11	268	1,684	303	1,987
Art and design . . . . .	180	852	97	156	178	66	..	663	866	1,529
Building, surveying and architecture . . . . .	155	340	101	124	135	19	..	820	54	874
Commercial and business studies . . . . .	860	2,757	522	523	894	142	299	5,172	825	5,997
Engineering and technology . . . . .	419	1,703	294	299	336	54	..	3,091	14	3,105
Liberal studies . . . . .	11	644	..	86	369	20	206	611	725	1,336
Music . . . . .	81	..	25	..	..	19	..	35	90	125
Para-medical . . . . .	337	671	67	155	164	45	..	379	1,060	1,439
Teacher education . . . . .	163	..	..	..	..	119	188	117	353	470
Total —1971	2,544	8,019	1,559	1,501	2,329	495	961	13,068	4,340	17,408
1970	2,082	6,866	1,309	1,083	2,091	400	807	11,418	3,220	14,638

**COLLEGES OF ADVANCED EDUCATION: TEACHING STAFF, BY SUBJECT FIELD  
STATES AND A.C.T.(a), 1971**

(Advanced level work of full-time and part-time teaching staff expressed in equivalent full-time units and rounded to whole numbers)

	<i>N.S.W.(b)</i>	<i>Vic.</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>
<b>FULL-TIME STAFF</b>						
Agriculture . . . . .	44	43	8	7	..	..
Applied sciences . . . . .	75	314	36	61	14	24
Art and design . . . . .	22	166	23	18	13	..
Building, surveying and architecture .	19	56	25	31	3	..
Commercial and business studies .	26	211	30	57	6	18
Engineering and technology . . . . .	39	326	88	65	4	..
Liberal studies . . . . .	1	100	13	33	..	25
Music . . . . .	18	..	..	..	8	..
Para-medical . . . . .	28	76	28	37	9	..
Teacher education . . . . .	..	..	..	..	32	10
<i>Total—1971 . . . . .</i>	<i>339</i>	<i>1,293</i>	<i>249</i>	<i>309</i>	<i>88</i>	<i>77</i>
1970 . . . . .	252	1,129	226	267	55	43
<b>PART-TIME STAFF</b>						
Agriculture . . . . .	1	4	3	..	..	..
Applied sciences . . . . .	17	47	3	6	9	5
Art and design . . . . .	34	17	6	4	6	..
Building, surveying and architecture .	7	17	4	8	3	..
Commercial and business studies .	5	33	4	7	9	2
Engineering and technology . . . . .	8	30	7	4	8	..
Liberal studies . . . . .	..	11	7	4	1	5
Music . . . . .	11	..	..	..	1	..
Para-medical . . . . .	7	6	13	3	2	..
Teacher education . . . . .	..	..	..	..	4	3
<i>Total—1971 . . . . .</i>	<i>90</i>	<i>165</i>	<i>47</i>	<i>36</i>	<i>42</i>	<i>15</i>
1970 . . . . .	93	228	31	32	34	12
<b>ALL STAFF</b>						
Agriculture . . . . .	44	47	11	7	..	..
Applied sciences . . . . .	91	361	39	67	23	29
Art and design . . . . .	56	184	29	22	19	..
Building, surveying and architecture .	27	73	29	39	6	..
Commercial and business studies .	31	244	34	64	15	20
Engineering and technology . . . . .	47	357	95	69	12	..
Liberal studies . . . . .	1	111	20	37	1	30
Music . . . . .	29	..	..	..	9	..
Para-medical . . . . .	35	82	40	40	11	..
Teacher education . . . . .	..	..	..	..	36	13
<i>Total—1971 . . . . .</i>	<i>428</i>	<i>1,458</i>	<i>297</i>	<i>345</i>	<i>130</i>	<i>92</i>
1970 . . . . .	345	1,357	256	299	89	55

(a) Statistics comparable with other States are not available for Queensland. In 1970 the number of staff teaching at Queensland colleges of advanced education was 307 full-time and 444 part-time. These statistics include staff engaged in teaching in courses which were not at an advanced level. (b) Includes 68 full-time teaching staff at the Mitchell College of Advanced Education for whom details of subject field are not available.



## Teacher education

State education departments recruit most prospective teachers for government service from students leaving school after completion of secondary education. Each department offers training awards annually on the basis of academic merit and personal suitability. These awards cover the cost of a teacher training course (which may include university studies) and provide a living allowance. Students are usually required to enter into an agreement to serve for a specified number of years in the government schools of the State where they have trained. In some States intending teachers can obtain a scholarship at the first public secondary examination to enable them to complete teachers college entrance requirements.

The State education departments conduct teachers colleges to train teachers for government schools. These colleges are co-educational and, in the larger States, have been established in country areas as well as in cities. The principal and staff of the colleges are responsible to the Director-General of Education in the State concerned. Recently, movements have been made in several States towards the autonomy of government teachers colleges. Teacher education is now being conducted at Mitchell (Bathurst), Riverina (Wagga), the Tasmanian, and Canberra Colleges of Advanced Education and the Capricornia and Darling Downs divisions of the Queensland Institute of Technology. Teachers colleges are also conducted by other organisations. For details of Commonwealth financial assistance to the States for building projects. *see* page 660.

In 1971 there were 10 government teachers colleges in New South Wales, 14 in Victoria, 4 in Queensland, 5 in South Australia, 4 in Western Australia, and 1 in Tasmania. Excluding kindergarten teachers colleges (*see* page 648) there were 7 private colleges in New South Wales, 6 in Victoria, 2 in Queensland and 1 in the Australian Capital Territory.

### Teachers for government schools

*Training of teachers.* Most teachers for government primary schools are trained in teachers colleges. Intending secondary school teachers either obtain a university degree with additional professional teaching training such as a Diploma in Education, a diploma or certificate from a teachers college or follow a secondary teaching course at a college of advanced education. Teachers of specialist subjects, such as music, art, manual arts, domestic science, and commercial subjects, receive from two to five years training which varies according to the institution concerned and the type of school in which the teacher is to serve. Where the specialist course is given at an institution other than the teachers college—e.g. at a university, college of advanced education, technical college, or conservatorium of music, students are generally required to attend teachers college or university lectures in education, and in some cases the specialist course is followed by a year of professional training. Courses designed to train physical education teachers are offered in universities in some States, and in at least one teachers college in every State.

Training for teachers of agricultural subjects in secondary schools consists of either an agricultural college diploma or a university degree course together with professional teacher training. Teachers of technical subjects in secondary schools may be trained in manual or industrial arts courses of two to four years duration, at teachers colleges, colleges of advanced education, technical colleges, or, in one State, at a university.

At several Australian universities, students wishing to take up teaching as a profession can receive their professional training along with the study of their teaching subjects as part of a first degree course. Courses of a similar nature are available at some colleges of advanced education where teacher education courses are integrated into the general teaching of the college.

The following table shows students undertaking teacher education courses in government and non-government colleges from 1968 to 1971. The figures exclude enrolments of practising and newly qualified teachers, and those teachers at short refresher courses and summer schools. They also exclude non-award students enrolled in part-time courses at the Technical Teachers College, Victoria and technical teacher trainees in Victoria who are undertaking one or two years industrial experience.

TEACHER EDUCATION(a): ENROLMENTS BY AFFILIATION AND SEX  
1968 TO 1971

	1968		1969		1970		1971		
	Males	Females	Males	Females	Males	Females	Males	Females	Persons
DEPARTMENTAL STUDENTS									
New South Wales . . . . .	3,304	5,693	3,650	6,344	4,321	7,226	5,501	9,403	14,904
Victoria . . . . .	3,629	6,406	4,422	7,104	4,754	8,162	(b)5,024	8,618	13,642
Queensland . . . . .	836	2,310	966	2,655	1,128	2,797	1,307	3,051	4,358
South Australia . . . . .	1,404	2,089	1,484	2,299	1,571	2,701	1,748	2,984	4,732
Western Australia . . . . .	725	1,236	797	1,452	832	1,680	885	1,944	2,829
Tasmania . . . . .	343	714	355	769	422	776	470	862	1,332
Total . . . . .	10,241	18,448	11,674	20,623	13,028	23,342	14,935	26,862	41,797
Courses for primary teaching . . . . .	2,593	9,256	2,840	10,269	3,251	11,184	3,600	12,623	16,223
Courses for secondary teaching . . . . .	7,376	8,838	8,573	10,008	9,753	12,113	(b)11,312	14,201	25,513
Courses not classifiable as primary or secondary teaching . . . . .	272	354	261	346	24	45	23	38	61
Total . . . . .	10,241	18,448	11,674	20,623	13,028	23,342	14,935	26,862	41,797
Enrolled at government teachers college and not enrolled elsewhere . . . . .	3,501	10,565	4,524	12,196	5,028	13,463	(b)6,092	15,012	21,104
Enrolled at university or other institution—									
Also enrolled at teachers college . . . . .	6,258	7,304	6,101	7,134	6,483	8,005	6,434	8,332	14,766
Not enrolled at teachers college . . . . .	482	579	1,049	1,293	1,517	1,874	2,409	3,518	5,927
Total . . . . .	10,241	18,448	11,674	20,623	13,028	23,342	14,935	26,862	41,797
PRIVATE STUDENTS									
Enrolled at government teachers college . . . . .	166	309	214	373	227	327	169	386	555
Enrolled at private teachers college . . . . .	441	972	394	1,190	366	1,586	417	1,732	2,149
Total . . . . .	607	1,281	608	1,563	593	1,913	586	2,118	2,704
Courses for primary teaching . . . . .	333	952	310	1,217	295	1,587	301	1,822	2,123
Courses for secondary teaching . . . . .	251	265	274	284	273	270	271	196	467
Courses not classified as primary or secondary teaching . . . . .	23	64	24	62	25	56	14	100	114
Total . . . . .	607	1,281	608	1,563	593	1,913	586	2,118	2,704
ALL STUDENTS									
Courses for primary teaching . . . . .	2,926	10,208	3,150	11,486	3,546	12,771	3,901	14,445	18,346
Courses for secondary teaching . . . . .	7,627	9,103	8,847	10,292	10,026	12,383	(b)11,583	14,397	25,980
Courses not classifiable as primary or secondary teaching . . . . .	295	418	285	408	49	101	37	138	175
Total . . . . .	10,848	19,729	12,282	22,186	13,621	25,255	15,521	28,980	44,501

(a) Excludes 767 students enrolled at kindergarten teachers colleges in 1968; 877 in 1969; 977 in 1970; and 1,069 in 1971.  
 (b) Includes 366 males undertaking a two year part-time course at the Technical Teachers College.

The following table shows departmental students enrolled in the first year of their course and also those enrolled in the final year of their course. The figures exclude enrolments in one year courses which are mainly extension courses for students who have qualified as teachers.

DEPARTMENTAL STUDENTS ENROLLED IN THE FIRST  
AND IN THE FINAL YEAR OF A COURSE, 1971

	N.S.W.	Vic.	Q.U.	S.A.	W.A.	Tas.	Australia		
							Males	Females	Persons
Enrolled in the first year of a course	6,385	(a)4,449	1,910	1,741	1,133	508	5,626	10,500	16,126
Enrolled in the final year of a course	2,950	(a)3,207	1,132	1,029	762	308	2,934	6,454	9,388

(a) Includes 193 and 173 males who are undertaking a two-year part-time course at the Technical Teachers College, for the first year, and the final year of a course, respectively.

*In-service training.* In-service training in Australia is directed chiefly towards keeping teachers abreast of developments and adding to their basic training. In-service training usually takes the form of short courses held sometimes during vacations, sometimes during school-time or in the evening. In some States in-service courses for teachers in remote areas are provided by correspondence and there are also in-service courses for special groups of teachers such as headmasters or teachers in one-teacher schools. In addition, district inspectors are responsible for organising short conferences of teachers, where professional topics are discussed. Education departments encourage teachers to pursue university courses and in some States pay the cost of courses undertaken by selected teachers.

*Status of teachers.* Most teachers in government schools are permanent public servants and have security of tenure, superannuation rights, and the right of appeal in matters of promotion. The centralised education systems and the general policy of providing fully trained teachers for both city and country areas means that teachers are subject to transfer to any part of the State in which they serve.

### Training of technical teachers

To preserve links with industry and trade practice, schemes have been developed for the recruitment of specialist tradesmen as teachers and for their training in educational method and teaching techniques. In Victoria, the Technical Teachers College provides training for students with appropriate diploma or trade qualifications and suitable industrial experience. In New South Wales, technical college lecturers and tradesmen-teachers receive an in-service course of teacher training in general education theory and training method, while correspondence courses and visiting lecturers assist the newly appointed tradesman-teacher in country colleges. Variations in this scheme are in operation in other States. Many technical teachers, principally of academic, commercial and domestic science subjects, hold trained teachers certificates from teachers colleges.

### Training of non-government school teachers

Teachers for non-government schools receive their training in a number of ways. The Roman Catholic Church staffs both its primary and secondary schools, as far as possible, with members of religious orders. In recent years there has been an increase in the number of lay teachers being employed in Catholic schools, and training of students to become lay junior-secondary or primary teachers has been undertaken by Catholic teachers colleges.

Other non-government schools tend to recruit their staff from teachers who have already obtained qualifications in Australia or overseas. In New South Wales and Victoria, non-government school authorities offer courses designed specially for teachers in their schools. Non-government schools also recruit university graduates, who are then given professional guidance by senior members of the school staff. Private students may enrol at government teachers colleges on payment of a fee, but the number of places available is limited. The Commonwealth Government provides financial assistance to the States for approved building projects provided that the colleges admit a number of private students. Some teacher trainees who will eventually teach in non-government schools train in this way.



The following table shows, for non-government teachers colleges, the number of students enrolled, and the number in the final year of their courses.

**NON-GOVERNMENT TEACHERS COLLEGES: ENROLMENTS(a), AUSTRALIA, 1971**

	<i>Enrolments</i>			<i>Students in final year of a course</i>		
	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
For primary teaching . . .	207	1,595	1,802	57	651	708
For secondary teaching . . .	198	96	294	42	22	64
Not classifiable as primary or secondary teaching . . .	12	41	53	1	11	12
<b>Total . . . . .</b>	<b>417</b>	<b>1,732</b>	<b>2,149</b>	<b>100</b>	<b>684</b>	<b>784</b>

(a) These figures include students taking university degree courses whether instruction is given at the university or the college. They exclude students at kindergarten teachers colleges.

During vacations many non-government teachers attend in-service training courses organised by education departments. In recent years vacation courses have been provided by bodies other than education departments for teachers from both government and non-government schools. For example, an independent body, the Science Foundation for Physics within the University of Sydney, has provided such courses for teachers of science in secondary schools in New South Wales.

For details of Commonwealth financial assistance to teachers colleges *see* pages 660-1.

#### Pre-school teachers colleges

With the exception of Tasmania, each State has a pre-school or kindergarten teacher training college which provides a three-year diploma course for teachers of children in the 3-8 year age group. In New South Wales, Queensland, South Australia and Western Australia, these colleges are the responsibility of the Kindergarten Union in each of those States and each college is administered by a College Council.

In Victoria, the Melbourne Kindergarten Teachers College is administered by an autonomous College Council. The Day Nursery Teachers College in New South Wales has a similar function to those colleges mentioned above, and is the responsibility of the Sydney Day Nursery and Nursery Schools Association. Pre-school teacher training in Tasmania is provided within the Tasmanian College of Advanced Education which offers a three-year course of training.

In 1971 there were 1,069 students (all female) enrolled for diploma courses at kindergarten teachers colleges, of whom 298 were in their final year.

The Commonwealth Government provides financial assistance for pre-school teachers colleges. For details, *see* page 661.

#### Technical education

Australian technical colleges offer training in all the major industrial skills and in a wide variety of commercial, artistic and domestic occupations. The main types of courses are described in Year Book No. 55, pages 498 and 499.

The following is an outline of the administration of, and some recent developments in, technical education in each State.

*New South Wales* has a separate State Department of Technical Education under the Minister for Education and Science. A Technical Education Council advises the Minister, and there is also an advisory council or committee for each technical college, established on a local basis to assist the principal in determining the needs of his own area. These bodies include representatives from industry and commerce.

*Victoria.* The larger colleges are controlled by their own councils and are affiliated with the Victoria Institute of Colleges. These colleges are at present responsible to the Victoria Institute of Colleges for the development and operation of tertiary courses and to the Education Department for the conduct of non-tertiary courses.



Government-controlled colleges are administered by the Technical Education Division of the Education Department. In general, diploma awarding schools or sections of technical institutions are in the process of being separated from the trade, certificate and other sections of technical education, and of being developed as colleges of advanced education. They are now receiving Commonwealth assistance for this purpose.

*Queensland.* Technical colleges in Queensland are administered by a branch of the State Education Department. This branch also administers the Technical Correspondence School, which provides instruction in many courses to students in remote areas. Those institutions offering diploma courses in technological fields are now colleges of advanced education, which function as autonomous institutions and receive Commonwealth financial assistance. At present, they also offer technical courses at the certificate level.

*South Australia.* Technical colleges are administered by a branch of the State Education Department. For a number of years, the South Australian Institute of Technology has offered courses which lead to a level of qualification below that of full professional status. The courses provide for those employed in the area between the tradesman and the professionally qualified person.

*Western Australia.* Technical schools, colleges and education centres are administered by a division of the Western Australian Education Department and offer a wide range of technician and vocational courses related to commerce, industry, agriculture and the home. In addition, the Technical Educational Division offers study programmes for students undertaking the examinations of other examining bodies, as well as general education and leisure-type activities. The Technical Extension Service of the Division offers a wide range of correspondence instruction.

*Tasmania.* Technical education is controlled by the Tasmanian Education Department through a Board of Technical Education whose chief administrative officer is the Director of the Technical Education Branch. There are technical colleges in five centres: Hobart, Launceston, Devonport, Burnie, and Queenstown. The Tasmanian College of Advanced Education is being developed and since January 1972 has taken over all diploma courses. Technical colleges will in future be concerned with apprenticeship/trade, post-trade and technical courses, and commercial and general courses at the certificate level.

The numbers of colleges, teachers and enrolments in each State and Territory during 1970, and for Australia for the period 1966 to 1970 are given in the following table. The statistics include senior technical schools and colleges, institutes of technology and colleges of advanced education providing technical education, and their teachers and students at all levels. Whilst details for colleges of advanced education are included, the basis of collection differs from that used for advanced level courses, statistics of which are given on pages 642-3.

TECHNICAL EDUCATION: COLLEGES, TEACHERS AND ENROLMENTS  
STATES AND TERRITORIES, 1970

	Colleges	Teachers			Students enrolled		
		Full-time	Part-time	Total	Males	Females	Persons
New South Wales(a)(b)(c)(d)	60	1,793	4,435	6,228	106,039	56,579	162,618
Victoria(e)	93	4,848	2,260	7,108	n.a.	n.a.	69,558
Queensland(d)	18	677	1,006	1,683	25,350	4,193	29,543
South Australia(d)	27	664	1,773	2,437	n.a.	n.a.	40,982
Western Australia(d)(f)(g)	83	943	1,911	2,854	45,747	26,659	72,406
Tasmania	9	181	640	821	6,087	2,191	8,278
Northern Territory	2	16	97	113	1,736	2,650	4,386
Australia—1970	292	9,122	12,122	21,244	n.a.	n.a.	387,771
1969	296	8,883	11,499	20,382	n.a.	n.a.	398,078
1968	275	9,041	11,746	20,787	n.a.	n.a.	388,824
1967	230	8,071	11,144	19,215	n.a.	n.a.	376,915
1966	226	7,475	10,836	18,311	n.a.	n.a.	375,003

(a) Students enrolled represent gross enrolments, no allowance having been made for students enrolled in more than one course. (b) Includes Australian Capital Territory. Gross enrolments at Canberra Technical College were 6,877 in 1970; 6,105 in 1969; 5,956 in 1968; 5,578 in 1967; and 4,855 in 1966. (c) Figures include teachers and students at 131 associated centres and 4 mobile units. (d) Includes correspondence course teachers and students. (e) Prior to 1969 statistics of senior technical schools affiliated with the Victoria Institute of Colleges were included. Teachers include those at both senior and junior technical colleges. (f) Teachers represent number of teaching positions. (g) Country extension centres are now counted separately.

Commonwealth assistance to technical education is shown on page 660.

### Agricultural and forestry education

There are agricultural faculties in universities in all States. Ten of the faculties provide various degree courses in agricultural science and agricultural economics and there are also three faculties of veterinary science. Besides undergraduate courses, these faculties collectively provide a wide range of post-graduate diploma courses as well as facilities for training for higher degrees.

At least one government agricultural college in each State, except Tasmania, is a college of advanced education. The primary role of these colleges is to train students for professional extension work or technology roles in the agricultural services. An exception is Muresk in Western Australia, which, like Marcus Oldham (an independent college in Victoria), places emphasis on farm management. Orange Agricultural College in New South Wales will also concentrate on farm management training when it opens in 1973.

At the sub-tertiary level, other colleges which aim to teach the principles and practices of agriculture and farm management to those intending to take up farming as a career are being developed in New South Wales, Victoria, Queensland and Tasmania. There is also a wide range of technical training available.

Training in forestry at undergraduate and post-graduate levels, is provided by a Department of Forestry in the Faculty of Science within the Australian National University. A four-year degree course is offered, but the first year of this course may be undertaken, by arrangement, at any other university. The University of Melbourne provides a four-year degree course in forestry and at the Victorian School of Forestry, Creswick, a three-year diploma course can be taken.

### Other education

#### Conservatoria of music, schools of art, etc.

In addition to the conservatoria of music which are attached to universities or which constitute separate colleges of advanced education, there is the Canberra School of Music which offers a four-year full-time diploma course of theoretical and practical studies. Some schools of art have been developed into colleges of advanced education or included as departments in such colleges, and offer courses in printing, sculpture, and design as well as in basic art.

#### Educational training in the defence services

Each of the three defence services maintains institutions for the training of officers. The Royal Australian Naval College, Jervis Bay, Australian Capital Territory, became an affiliated college of the University of New South Wales in 1968. Selected matriculated cadets complete first year degree studies in science or engineering at the College, and subsequent years of degree studies at the University. The Royal Military College, Duntroon, Australian Capital Territory, became an affiliated college of the University of New South Wales in 1968. The Royal Australian Air Force Academy, Point Cook, Victoria, has evolved from the Royal Australian Air Force College, which was established in 1948 as a tertiary training centre to provide a professional education for permanent officers of the Air Force. It is affiliated with the University of Melbourne and has adopted that University's Bachelor of Science course. The Academy is also permitted to present students for higher degrees in science and the degree of Doctor of Philosophy. Students may also proceed to the University of Sydney to take a degree in aeronautical engineering. The Australian Staff College and the Royal Australian Air Force Staff College provide one year courses for officers. Educational training is also provided in the apprentice training schools conducted by each of the Defence Services, and in the Royal Australian Navy School for Junior Recruits. The Royal Australian Air Force School of Languages, Point Cook, Victoria, conducts courses in French and Asian languages. In 1971 there were 44 students enrolled, of whom 6 were Royal Australian Air Force personnel. Courses at the new Australian Joint Services Staff College commenced in January 1970. The College provides higher training for selected service officers and certain officers of the Commonwealth employed in Departments associated with defence matters. College courses cover political, defence and economic subjects and are of six months duration. For further information on service training and educational facilities, see Chapter 4, Defence.

The following table shows the number of officers, officer cadets and other ranks enrolled in the training establishments mentioned above.

**SERVICE ESTABLISHMENTS PROVIDING EDUCATIONAL TRAINING  
AUSTRALIA, 1971**

<i>Establishment</i>	<i>Enrolments</i>	<i>New entrants during year</i>	<i>Number completing course during year</i>
<b>OFFICERS AND OFFICER CADETS(a)</b>			
Staff Colleges—			
Australian Staff College . . . .	72	72	72
Royal Australian Air Force Staff College	30	30	29
Officer cadets—			
Royal Australian Navy—			
Royal Naval College . . . .	137	68	32
H.M.A.S. <i>Lonsdale</i> . . . .	11	5	..
Royal Military College . . . .	311	95	51
Royal Australian Air Force—			
R.A.A.F. Academy . . . .	112	38	21
R.A.A.F. Diploma Squadron . .	143	53	34
<b>APPRENTICES AND OTHER RECRUITS(b)</b>			
Royal Australian Navy—			
Naval artificer apprentices . . .	545	188	139
School of Technical Training . . .	22	17	29
Junior recruits . . . .	725	725	593
Topmen scheme . . . .	91	70	45
Academic Instructors(c) . . . .	5	2	3
Army Apprentice School . . . .	484	194	439
Royal Australian Air Force—			
School of Technical Training . . .	409	179	116
School of Radio . . . .	141	62	33

(a) Includes 300 cadets enrolled for university courses and 154 enrolled at an institute of technology. (b) Includes 14 apprentices enrolled at institutes of technology. (c) Non-commissioned officers engaged on part-time instructional duties and part-time study at teachers training college.

### The Australian School of Pacific Administration

The Australian School of Pacific Administration, which used to train students in the various aspects of service and administration in Commonwealth Territories including teaching, is now an important centre for training Papuan New Guineans. For details of its new role, see Chapter 28, The Territories of Australia.

Because of a change in role, most of the existing training activities for both Papua New Guinea and the Northern Territory undertaken at the School of Pacific Administration are being phased out. In 1972, the School trained 51 Australians doing final year teacher training before commencing service in Papua New Guinea and the Northern Territory. The School also undertook training of Australians for service as patrol officers in Papua New Guinea and Aboriginal welfare officers in the Northern Territory.

### Australian Administrative Staff College

Opened in 1957, the Australian Administrative Staff College is a private organisation working in close co-operation with government and other public bodies, the armed services, and the trade union movement. It was founded, and is owned, by a large group of leading Australian companies and has its permanent premises at Mount Eliza, near Melbourne. The College conducts residential courses for administrators to further the study of the problems which arise in managerial work.



### Technical training by government departments

Although most needs of departments for trained staff are met by apprenticeship schemes and other technical college courses and by the universities, some departments provide training which is not available elsewhere. The most important field for which such training is provided is the training of telephone, telegraph, radio, and television technicians by the Postmaster-General's Department.

### Post-school study courses

As part of the quarterly population survey (see Chapter 20, Employment and Unemployment) a survey was conducted in all States and Territories in August 1968 to obtain estimates of persons enrolled for courses of study or training outside school. The results of the survey supplement data about enrolments collected from schools and other institutions, and present a general indication of post-school education. For details of the survey see Year Book No. 56, pages 640-44.

### Migrant education

The Department of Immigration is responsible for migrant education as part of its responsibility for migrant integration generally. Migrant education includes not only the teaching of English but also counselling and instruction to prepare migrants for life in their new environment and to assist them to integrate more quickly into the Australian community.

Following a major review by the Government of migrant education early in 1970, increasing emphasis has been placed upon accelerated and more specialised forms of instruction and on developing courses designed to meet the varying needs of individual groups of migrants. The programme now includes full-time intensive courses for professional and other well-educated migrants, accelerated courses particularly suited to workers and migrant women, special courses for migrants in industry, daytime classes for migrant women and a special language programme for migrant children in government and independent schools.

Courses in English are arranged in conjunction with State education departments, colleges of advanced education and other approved educational bodies. Advice on aspects of teaching English, co-operation in the arrangement of teacher training courses and the production of suitable teaching and learning materials is provided by the Department of Education and Science.

The Australian Government allocates funds to the Intergovernmental Committee for European Migration which, in Greece, Italy, Germany and Austria, provides pre-embarkation class and correspondence instruction for intending migrants to Australia. The Department itself arranges language and orientation courses in Turkey and Yugoslavia and distributes a recorded introductory English language course in Finland. The Governments of Holland, Belgium and Spain assist with courses conducted in these countries. Language instruction is given by Departmental Education Officers on ships carrying significant numbers of non-English speaking migrants to Australia.

A radio/correspondence course in English is conducted in Australia in co-operation with the ABC and in May 1971 an educational television programme was commenced by arrangement with Station Channel WIN 4 Wollongong.

Prior to the new initiatives announced by the Government in 1970, expenditure on migrant education had been to the order of \$1 million annually. Following the new initiatives, expenditure has increased, rising to \$3.875 million in 1970-71 and to \$6.38 million in 1971-72. Expenditure in the financial year 1972-73 is estimated to be some \$10 million.

The *Immigration (Education) Act* 1971 was introduced to give legislative authority for the ongoing programme. The Act came into force on 12 May 1971.

### Adult education

The term 'adult education' as used in Australia refers mainly to non-vocational educational and cultural activities for adults. While the nature of the recognised adult education authorities varies from State to State, their major activities have many common features. Regular courses of lectures are organised on such topics as literature, music, drama, international affairs, languages, and crafts. Some authorities also organise discussion groups, festivals and summer schools, and provide special services for groups in remote areas. In 1960 an Australian Association of Adult Education was formed, and its first annual conference was held in Adelaide in 1961. The Association handles matters pertaining to adult education at a national level and arranges liaison with similar bodies in other countries.

One of the first bodies active in the field of adult education in Australia was the Workers' Educational Association, which formed associations in all States in 1913. Its aims were to bring the universities into closer relationship with the community in general and to provide for higher education in civic and cultural subjects. These associations have been superseded by Adult Education Boards or Councils set up by the State governments in Victoria, Queensland, and Tasmania, and by the university in Western Australia. In the other two States, New South Wales and South Australia, the associations continue to co-operate with the universities in their extension work and are given direct grants by the governments concerned.



There are throughout Australia various other organisations which are active in the field of adult education. The World Education Fellowship, for example (*see below*), since its inception in Australia has been interested in adult education.

### Overseas students

Information about overseas students in Australia is available from three statistical series. The Department of Education and Science compiles statistics of *government sponsored overseas students* in Australia. The statistics of government sponsored students in institutions of higher learning are compiled from records held by that Department; those of other government sponsored students are estimates from information held by the Department of Foreign Affairs. In June 1971, there were 1,736 government sponsored overseas students in institutions of higher learning, and 538 other government sponsored students. These figures exclude some personnel of overseas armed forces taking courses at Australian Defence Colleges. Altogether, there were 2,274 government sponsored overseas students in Australia in 1971. Students under the Colombo Plan Technical Co-operation Scheme numbered 1,592. The largest numbers of government sponsored students came from Malaysia, Indonesia, South Vietnam, and Thailand.

The Department of Immigration prepares statistics of overseas students in Australia who have been admitted under the *Private Overseas Student Programme*. In 1971, there were 10,440 students (7,059 males and 3,381 females) undertaking courses or training in Australia under the Programme; 5,902 from Malaysia, 1,356 from Hong Kong, and 884 from Singapore. Courses chosen were mainly in engineering and building (1,754), economics and commerce (1,394), medicine (including paramedical) and dentistry (1,826), and general and school courses (2,797).

*Overseas students enrolled for advanced level courses* in Australian education institutions are enumerated annually. The institutions reported some 7,982 enrolments in 1971, about 6,131 at universities, 1,577 at colleges of advanced education and some 274 at other institutions.

## Organisations associated with education

### Australian Council for Educational Research

The Australian Council for Educational Research, a non-government body, is engaged on educational research in a wide variety of fields, ranging from tertiary to pre-school education. It conducts surveys and inquiries, makes grants to approved educational investigators, serves as a centre for disseminating educational information, provides training for research workers, and standardises and distributes educational and psychological tests for use in Australia. Although this Council is an autonomous body, the Commonwealth and State governments give substantial financial support.

### World Education Fellowship

The World Education Fellowship is a world organisation of parents, educators and other citizens interested in the development of new educational practices. It was founded in London in 1915 and spread to Australia at the time of a regional conference held here in 1937. There are now sections in each State. Its Australia-wide journal *New Horizons in Education* is published twice a year.

### Australian College of Education

The Australian College of Education was formed in 1959. Its aims are to bring together leading teachers and administrators in every field of education, to raise the standard of the profession of education in Australia, to establish and proclaim fundamental educational values, and to recognise outstanding contributions to educational practice. Chapters of the College have been set up in all States, and several of the addresses and papers delivered at meetings of the College have been issued in published form.

## Commonwealth activities in education

### Fields of activity

Although education is primarily the responsibility of the States, the Commonwealth has instituted a number of measures of direct assistance to educational institutions and to students. It is responsible for public education in its own Territories and is engaged in educational activities incidental to its responsibilities in such areas as defence, external relations, immigration, and social services. Education in Commonwealth Territories is outlined in Chapter 28, The Territories of Australia; various schools and colleges for the Defence Services are referred to on pages 650–1, and other activities which may be considered broadly as educational are referred to in the section on Broadcasting and Television in Chapter 12, Transport, Communication and Travel. Details of Commonwealth expenditure on education are provided on pages 663–7.

### Department of Education and Science

The Commonwealth Department of Education and Science was created in December 1966. The Department, which absorbed the former Education Division of the Prime Minister's Department including the Commonwealth Office of Education, and subsequently, in 1968, the Education Branch of the Department of the Interior, is concerned with direct grants for educational purposes, e.g. for universities, colleges of advanced education, school libraries, technical schools, and science buildings, as well as with grants for building teachers and pre-school teachers colleges. It administers per-capita grants to non-government (i.e. independent) schools for running costs and is involved in curriculum development projects. The Department is responsible for the various Commonwealth scholarship schemes, for the schemes of Queen Elizabeth II Fellowships and Queen's Fellowships and for special scholarships offered by overseas countries for Australians. Among the Department's other responsibilities are matters in the field of international relations in education, including UNESCO and Commonwealth Co-operation in Education, and liaison with State and other education bodies throughout Australia. The Department provides professional advice on education to other Commonwealth departments and authorities and develops courses and materials for migrant education. It administers grants to such bodies as the Academy of Science, the Humanities Research Council, the Social Sciences Research Council and the Institute of Aboriginal Studies, and is responsible for grants for scientific research such as those recommended by the Australian Research Grants Committee. It administers educational services in the Australian Capital Territory and the Northern Territory.

The *Australian Universities Commission* and the *Australian Commission on Advanced Education* are responsible to the Minister for Education and Science. The Minister is also responsible for the *Commonwealth Scientific and Industrial Research Organization*, the *National Standards Commission*, the *Australian National University*, the *Institute of Aboriginal Studies*, and the *Canberra College of Advanced Education*. The Department of the Environment, Aborigines and the Arts is responsible for the National Library and for art, literature and other cultural activities in which the Commonwealth is interested.

### Scholarship Schemes

*Commonwealth scholarships.* The Commonwealth Government provides financial assistance to students through five major scholarship schemes. A total of 29,800 new awards were made available in 1972 under these schemes.

Under the *Commonwealth Post-graduate Research Awards Scheme*, 700 new awards were made available in 1972 for students undertaking research leading to higher degrees at Australian universities. The awards are for full-time study and may be renewed annually up to a maximum period of four years. In 1972, 100 awards were made available under the scheme of Commonwealth Post-graduate Course Awards for full-time students taking Masters degrees by course work. Both groups of awards carry a stipend of \$2,600 per annum and certain other allowances.

The *Commonwealth University Scholarship Scheme* made provision for 12,500 scholarships in 1972. Of these, 8,500 are open entrance scholarships which are allocated amongst the States in proportion to population and are awarded on the basis of results achieved in Australian matriculation examinations. The remaining 4,000 scholarships are Later Year Awards for students who have already completed one or more years of a university course. A small quota of awards from each group is set aside as Mature Age Scholarships for students who have reached the age of thirty years. Scholarship holders have their fees paid and may receive a living allowance subject to a means test. The maximum rates of living allowances are \$1,100 per annum in the case of scholars living away from their parents and \$700 for scholars living with parents.

The *Commonwealth Advanced Education Scholarships Scheme* made provision for 4,000 scholarships in 1972 for students taking approved courses of advanced education at institutions other than universities. Benefits are similar to those for university scholarships.

The above schemes are the main responsibility of the *Commonwealth Scholarships Board* which is responsible for advising the Government on the policy and administration of Commonwealth post-graduate awards and university and advanced education scholarships. The Board, under its former title of the Universities Commission, was established by the *Education Act* 1945. It consists of a chairman and three other members.

Under the *Commonwealth Secondary Scholarship Scheme* students compete each year for 10,000 scholarships which will assist them during the final two years at secondary school. Secondary scholarship benefits are free of means test and comprise a yearly living allowance of \$200, a textbook and equipment allowance of \$50 per annum and reimbursement of compulsory fees up to a maximum of \$150 per annum.

The *Commonwealth Technical Scholarship Scheme* made available 2,500 new awards in 1972 to assist students to take approved technical courses. Most of these courses are at certificate level in technical colleges. Full-time technical scholarship holders receive the same benefits as Commonwealth secondary scholars. The benefits paid each year to part-time technical scholars are an allowance of \$100, free of means test, and reimbursement of compulsory fees up to a maximum of \$100.

COMMONWEALTH SCHOLARSHIPS: NUMBERS OF SCHOLARS IN TRAINING  
30 JUNE 1971

Type of award	N.S.W.(a)	Vic.	Qld	S.A.(b)	W.A.	Tas.	Aust.
Post-graduate—							
Awarded—							
In 1971 . . . .	331	222	95	91	35	18	792
Prior to 1971 . . . .	528	283	127	139	59	27	1,163
<b>Total</b> . . . .	<b>859</b>	<b>505</b>	<b>222</b>	<b>230</b>	<b>94</b>	<b>45</b>	<b>1,955</b>
University scholarship—							
Awarded—							
In 1971 . . . .	4,786	3,187	1,646	1,068	827	279	11,793
Prior to 1971 . . . .	8,716	6,605	3,032	2,005	1,432	585	22,375
<b>Total</b> . . . .	<b>13,502</b>	<b>9,792</b>	<b>4,678</b>	<b>3,073</b>	<b>2,259</b>	<b>864</b>	<b>34,168</b>
Advanced education scholarship—							
Awarded—							
In 1971 . . . .	891	902	381	268	318	63	2,823
Prior to 1971 . . . .	720	1,138	497	330	247	111	3,043
<b>Total</b> . . . .	<b>1,611</b>	<b>2,040</b>	<b>878</b>	<b>598</b>	<b>565</b>	<b>174</b>	<b>5,866</b>
Secondary scholarship—							
Awarded—							
In 1971 . . . .	3,711	2,685	1,425	976	792	311	9,900
Prior to 1971 . . . .	3,670	2,717	1,384	904	753	248	9,676
<b>Total</b> . . . .	<b>7,381</b>	<b>5,402</b>	<b>2,809</b>	<b>1,880</b>	<b>1,545</b>	<b>559</b>	<b>19,576</b>
Technical scholarship—							
Awarded—							
In 1971 . . . .	1,077	669	218	209	190	65	2,431
Prior to 1971 . . . .	647	626	263	215	110	56	1,917
<b>Total</b> . . . .	<b>1,724</b>	<b>1,295</b>	<b>481</b>	<b>424</b>	<b>300</b>	<b>124</b>	<b>4,348</b>

(a) Includes the Australian Capital Territory.

(b) Includes the Northern Territory.

*Australian Agricultural Council Scholarships.* At the request of the Australian Agricultural Council the Department of Primary Industry makes available from the Commonwealth Extension Services Grant funds 12 scholarships annually (two in each State) to students in Australia who have qualified for a Commonwealth University Scholarship and who wish to proceed to an approved course of study leading to a degree in Agricultural Science, Agricultural Engineering, Agricultural Economics, Rural Science or Veterinary Science. The purpose of the awards is to foster interest in agriculture and related fields of study.

As at 30 June 1971, there were 54 students holding Agricultural Council Scholarships in Australia.

*Aboriginal Study Grants.* Awards under the Aboriginal Study Grants Scheme have been made since 1969 to assist Aborigines to take courses of study after leaving school. They provide full-time students with fees, a living allowance of \$1,100 per annum and other allowances; and the part-time students with fees and incidental expenses. In 1971, 499 students held grants.

*Aboriginal Secondary Grants.* This scheme assists students to continue schooling beyond the school leaving age by paying living costs, fees and other allowances. At 30 June 1971, 3,515 students held grants.

*Canberra Teacher Education Scholarships.* These awards were offered for the first time in 1971 and assist students undertaking courses of teacher training at the Canberra College of Advanced Education. The Scholarships are unbonded and benefits are similar to those for Advanced Education Scholarships. At 30 June 1971, there were 44 students holding awards.

*Commonwealth Teaching Service Scholarships.* This scheme was introduced in 1972 to assist students taking courses of teacher training who, on completion of that training, would become members of the Commonwealth Teaching Service. There were 200 awards available in 1972. They are unbonded and entitle holders to payment of all compulsory fees and to a living allowance, which is not subject to a means test, at the rate of \$700 per annum for a scholar living at home and \$1,100 per annum for a scholar living away from home.



### Advisory bodies

The Commonwealth Government has established various advisory bodies whose fields of concern relate to matters of education. The Australian Universities Commission advises the Commonwealth Government on university development and details of its work may be found on page 657. The Australian Commission on Advanced Education was established as a statutory body by an Act of Parliament in December 1971. It replaces the Commonwealth Advisory Committee on Advanced Education. The Commission advises the Minister on the balanced development of tertiary education outside universities. Within financial limits nominated by the Minister, the Committee recommends grants to the States for colleges of advanced education and directs grants to any such colleges established by the Commonwealth. The Australian Research Grants Committee advises the Minister on the merit of applications for research grants from individuals and research teams, and suggests the allocation of funds. The Queen Elizabeth II Fellowships Committee advises the Minister on the merit of applicants for these Fellowships, which are awarded for post-doctoral study in the physical and biological sciences. The Queen's Fellowships Committee advises the Minister on the merit of nominees and applicants for Senior Fellowships and Fellowships under this scheme which provides for high level and post-doctoral research in marine science. The Advisory Committee on Research into the Crown-of-Thorns Starfish advises the Commonwealth Minister for Education and Science and the Queensland Minister for Primary Industries on the merits of applications for grants on Crown-of-Thorns starfish research and suggests the allocation of funds. The Australian Advisory Committee on Research and Development in Education was established in 1970. Its functions are to initiate research in areas of importance in education, to recommend assistance for the training of educational research personnel and to direct attention to the application of research findings.

### International relations

An account of the relations and exchanges in the field of education before 1969 between Australia and other countries can be found in Year Book No. 55, pages 526-527.

The Department of Education and Science is responsible for the administration of various schemes concerned with international co-operation in education.

A feature of Australian UNESCO activities for 1971 was the interest shown in the promotion of the studies of cultures of the Pacific Islands. The Director-General of UNESCO had, following Australian and New Zealand initiatives, made funds available for this purpose, and the Australian UNESCO Committees, as a contribution to the international UNESCO programme, organised two related specialist meetings in 1971. The first attempted to define priorities for cultural preservation and development; the second was concerned with the improvement of library and documentation services. For both meetings the Department of Education and Science arranged for specialists sponsored by UNESCO to participate. The UNESCO programme of studies is expected to extend over five or six years, and the Australian UNESCO Committees will continue to advise on the Australian contribution.

The year 1971 saw the establishment of the Australian UNESCO Committee for Man and the Biosphere (MAB). MAB will deal with the rational conservation of natural resources and the Committee has been set up to advise on this new international UNESCO programme. Australia was elected to the International Co-ordinating Council for MAB for the 1971-72 biennium, and a delegation attended the first Council meeting in November. Australia was also represented at several other inter-governmental scientific meetings convened by UNESCO, concerned with the International Hydrological Decade, the World Science Information System (UNISIST), and the International Geological Correlation Programme.

In August 1971, the UNESCO International Advisory Committee on Natural Resources Research met in Australia at the invitation of the Australian Government.

Under the scheme of Commonwealth Co-operation in Education, the Department of Education and Science arranged short study programmes in Australia for a group of senior educationists from Africa and the Pacific and recruited Australian educationists to occupy key posts in developing countries of the Commonwealth.

As part of Australia's contribution to the Commonwealth Co-operation in Education programme, special training courses for teachers from Commonwealth countries were arranged in 1971 by the Department of Education and Science. A group of Ugandan infants teachers commenced a two year course in infant teaching methods at Wollongong Teachers College conducted by the New South Wales Department of Education. A one year course in infant teaching methods was also held at Wollongong and was attended by teachers from Fiji, Guyana, Gilbert and Ellice Islands, Mauritius, Western Samoa and Zambia. Similarly, teachers from Fiji, Ghana, Gilbert and Ellice Islands, Kenya, Malawi, New Hebrides, Nigeria, Tonga, Western Samoa and Zambia attended a one year course in primary teaching methods conducted by the South Australian Education Department in Adelaide. Macquarie University conducted a six months mathematics workshop and a one year course in development education for overseas educational administration. A course for inspectors of



schools was arranged by the Victorian Education Department. Other programmes followed by overseas educationists under Commonwealth Co-operation in Education Training Awards were the post-graduate diploma in education, home science, secondary school science, primary school science, industrial arts, automobile engineering, welding, stenography teacher training, primary school arts and crafts, arts and crafts for disabled children, teaching of the deaf, music, and physical education.

Under the Commonwealth Scholarship and Fellowship Plan, the Department of Education and Science is responsible for the award of Australian scholarships to students from other Commonwealth countries and for the nomination of Australian graduates for awards offered by other Commonwealth countries. In 1971 Australian awards were taken up by students from Britain, Canada, Ceylon, Fiji, Ghana, Guyana, Hong Kong, India, Jamaica, Malaysia, Malta, New Zealand, Nigeria, Pakistan, Singapore, Tonga, and Uganda. Awards were offered to Australia by Britain, Canada, India, Hong Kong, Ghana, Nigeria, Ceylon, Pakistan, Jamaica, and Trinidad/Tobago.

The Department of Education and Science acts as the selection agency for post-graduate scholarships offered to Australian students by other governments. In 1971 scholarships were offered by 21 governments to Australian scholars. The Department is also responsible for the administrative procedures in connection with selection for the various types of travel grants offered by the Australian-American Educational Foundation to Australian scholars and educationists for study in the United States of America. Sixty-five Australians and 42 Americans took up the awards offered by the Foundation in 1971.

Australia became a member of the Organisation for Economic Co-operation and Development (OECD) in June 1971 (for details see Chapter 6, International Relations) and has begun to participate in the Organisation's activities in education. Australia has participated in sessions of the OECD Education Committee held in Paris and was represented at the Inter-governmental Conference on the Utilisation of Highly Qualified Personnel, held in Venice in 1971. In association with the Department of Foreign Affairs, the Department of Education and Science liaises with State education departments and other relevant bodies on educational matters arising from Australia's membership of OECD.

#### Commonwealth grants for education purposes

*Grants for research purposes.* The Second Report of the Australian Universities Commission recommended that during the calendar years 1964, 1965 and 1966 a total of \$10 million should be provided for universities to support research activities at the post-graduate level, half the sum to be provided by the Commonwealth and half by the States. The Australian Research Grants Committee, which is entrusted with the task of advising on the allocation for particular research projects, was established in April-May 1965. Its immediate function was to advise the Commonwealth on the distribution of the \$4 million for the year 1966.

At the beginning of 1967 it was decided that the Committee would continue to function through the 1967-1969 triennium, and was asked to recommend to the Commonwealth Government the distribution of \$9.2 million for the triennium, to be provided solely by the Commonwealth. Details of the distribution of this money may be obtained from the *Australian Research Grants Committee, Report 1967-69*. An amount of \$12.5 million (later increased to \$13.1 million to cover rises in academic salaries) was allocated by the Commonwealth for the 1970-72 triennium and details of its distribution can be obtained from *Grants Approved for 1970*, *Grants Approved for 1971*, and *Grants Approved for 1972* published by the Committee. A report for the 1970-72 triennium was published in mid 1972. For details of Commonwealth expenditure under the scheme in 1970-71 see page 666.

*Grants for universities.* The Australian Universities Commission, a statutory body established under the *Australian Universities Commission Act, 1959-1971*, advises the Minister for Education and Science on matters in connection with the grant of Commonwealth financial assistance for universities in the States and the Australian Capital Territory. To date, the Commission has presented four triennial reports. The total financial support for universities provided by Commonwealth and State governments on the Commission's recommendations for the years 1961 to 1975 has exceeded \$2,900 million, including fees. Since the Australian universities are almost wholly dependent on government finance, the Australian Universities Commission plays a key role in the determination of the growth and balanced development of the Australian university system.

Prior to the establishment of the Commission, there were nine universities—the Universities of Sydney, New South Wales, New England, Melbourne, Queensland, Adelaide, Western Australia, Tasmania and the Australian National University. Since 1958, an additional six universities have been established on the recommendations of the Commission. These universities are the University of Newcastle and Macquarie University in New South Wales, Monash and La Trobe Universities in Victoria, James Cook University of North Queensland and Flinders University of South Australia.

In the 1973-75 triennium two new universities will commence to take students, Griffith University in Brisbane and Murdoch University in Perth, and, in addition, the Wollongong University College will become an autonomous university in 1975.

The Fifth Report of the Australian Universities Commission was published in 1972 and recommended total grants from Commonwealth and State sources for State universities of over \$894 million for the 1973-75 triennium. It also recommended grants totalling \$122 million for the Australian National University. These recommendations were accepted by the Commonwealth Government which passed legislation to provide financial assistance for State universities in the 1973-75 triennium on the basis of the programme recommended by the Commission.

A summary of the maximum grants by the Commonwealth for all universities for the 1973-75 triennium and for the 1967-69 and 1970-72 triennia is shown in the following table. Details of Commonwealth payments for universities are given on pages 664-6 and an historical summary of the financial assistance provided for universities by the Commonwealth Government is given in Year Book No. 55, pages 515-18.

**ALL UNIVERSITIES: SUMMARY OF MAXIMUM COMMONWEALTH GRANTS FOR  
THE 1967-69, 1970-72 AND 1973-75 TRIENNA  
(\$'000)**

<i>Type of Grant</i>	<i>1967-69</i>	<i>1970-72</i>	<i>1973-75</i>
<b>Recurrent grants—</b>			
General . . . . .	174,968	267,731	362,295
Teaching hospitals . . . . .	810	1,036	1,354
Student residences . . . . .	1,950	2,588	4,215
<i>Total recurrent grants . . . . .</i>	<i>177,728</i>	<i>271,355</i>	<i>367,864</i>
<b>Building grants—</b>			
Building projects . . . . .	50,683	58,922	65,301
Teaching hospitals . . . . .	4,927	2,460	2,990
Student residences . . . . .	11,524	12,489	3,904
<i>Total building grants . . . . .</i>	<i>67,134</i>	<i>73,871</i>	<i>72,195</i>
Equipment . . . . .	985	2,047	22,720
Research . . . . .	..	4,000	3,000
<i>Total Commonwealth grants for all universities(a) . . . . .</i>	<i>245,847</i>	<i>351,273</i>	<i>465,779</i>
<i>Total State grants for State universities(b) . . . . .</i>	<i>278,980</i>	<i>401,219</i>	<i>550,085</i>
<b>Total . . . . .</b>	<b>524,827</b>	<b>752,492</b>	<b>1,015,864</b>

(a) Including receipts from fees of the Australian National University.  
State universities.

(b) Including receipts from fees of

The Commonwealth makes the above grants available to the States on the following bases.

<i>Grant</i>	<i>Basis</i>
Recurrent grants for general university purposes and for teaching hospitals.	The Commonwealth Government provides \$1 for each \$1.85 available from State grants and students' fees.
Recurrent grants for halls of residence and affiliated residential colleges.	Wholly supported by the Commonwealth Government.
Grants for equipment, for special research and for all buildings other than affiliated residential colleges.	The Commonwealth Government provides \$1 for each \$1 provided in State grants.
Grants for buildings for affiliated residential colleges.	The Commonwealth Government provides one half of the approved project cost, the remainder being provided by the State government and the residential college on various bases.

## MAXIMUM COMMONWEALTH GRANTS TO UNIVERSITIES FOR THE 1973-75 TRIENNium

(\$'000)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Recurrent grants—								
General . . . . .	98,962	65,776	32,323	24,621	18,488	8,025	114,100	362,295
Teaching hospitals . . . . .	475	433	189	123	94	40	..	1,354
Student residences . . . . .	1,365	1,100	690	225	270	200	365	4,215
<i>Total recurrent grants</i> . . . . .	<i>100,802</i>	<i>67,309</i>	<i>33,202</i>	<i>24,969</i>	<i>18,852</i>	<i>8,265</i>	<i>114,465</i>	<i>367,864</i>
Building grants—								
Building projects . . . . .	20,911	14,543	7,740	6,396	6,566	1,345	7,800	65,301
Teaching hospitals . . . . .	928	231	148	1,158	300	225	..	2,990
Student residences . . . . .	1,346	1,099	944	90	385	40	..	3,904
<i>Total building grants</i> . . . . .	<i>23,185</i>	<i>15,873</i>	<i>8,832</i>	<i>7,644</i>	<i>7,251</i>	<i>1,610</i>	<i>7,800</i>	<i>72,195</i>
Equipment . . . . .	9,140	5,540	2,705	2,790	1,750	795	..	22,720
Research . . . . .	1,135	850	350	375	200	90	..	3,000
<i>Total Commonwealth grants for all universities(a)</i> . . . . .	<i>134,262</i>	<i>89,572</i>	<i>45,089</i>	<i>35,778</i>	<i>28,053</i>	<i>10,760</i>	<i>122,265</i>	<i>465,779</i>

(a) Including receipts from fees of the Australian National University.

*Grants for colleges of advanced education.* The Commonwealth continues to be advised by the Australian Commission on Advanced Education. The following tables provide details of grants for the 1967-69 and 1970-72 triennia.

COLLEGES OF ADVANCED EDUCATION: SUMMARY OF  
MAXIMUM COMMONWEALTH GRANTS FOR THE 1970-72 AND  
1973-75 TRIENNIA

(\$ million)

<i>Type of grant</i>	<i>1970-72</i>	<i>1973-75</i>
Capital . . . . .	57.37	87.30
Recurrent . . . . .	57.28	108.04
Unmatched library . . . . .	0.50	0.50
Special matched library . . . . .	..	1.00
Research and investigation . . . . .	0.25	0.25
Capital assistance to student residences (non-collegiate) . . . . .	..	1.00
Capital assistance to student residences (country) . . . . .	..	0.50
Recurrent assistance to student residences (collegiate) . . . . .	0.01	0.50
<i>Total</i> . . . . .	<i>115.41</i>	<i>199.09</i>

The Commonwealth makes the above grants available to the States on the following bases.

<i>Grant</i>	<i>Basis</i>
Capital . . . . .	\$1 Commonwealth for every \$1 State
Recurrent . . . . .	\$1 Commonwealth for every \$1.85 of income from fees and State grants
Unmatched library . . . . .	No matching grant required
Matched library . . . . .	\$1 Commonwealth for every \$1 State
Research . . . . .	No matching grant required
Capital—Student residences (non-collegiate) . . . . .	\$1 Commonwealth for every \$1 State (up to a maximum of \$2,500 for each student place)
Capital—Student residences (country) . . . . .	\$1 Commonwealth for every \$1 State
Recurrent—Student residences . . . . .	Basic grant <i>plus</i> full-time student per capita contribution of \$60 per annum



**COLLEGES OF ADVANCED EDUCATION**  
**MAXIMUM COMMONWEALTH GRANTS FOR THE 1970-72 TRIENNium**  
(\$ million)

Type of grant	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
Capital . . . . .	21.05	25.50	7.75	10.00	7.50	3.90	11.60	87.30
Recurrent . . . . .	22.09	33.33	10.00	9.47	14.04	4.21	(a)14.90	108.04
Unmatched library(b) . . . . .	..	..	..	..	..	..	..	0.50
Special matched library(b) . . . . .	..	..	..	..	..	..	..	1.00
Research and investigation(b) . . . . .	..	..	..	..	..	..	..	0.25
Capital—Student residences (non-collegiate)(b) . . . . .	..	..	..	..	..	..	..	1.00
Capital—Student residences (country)(b) . . . . .	..	..	..	..	..	..	..	0.50
Recurrent—Student residences (collegiate)(b) . . . . .	..	..	..	..	..	..	..	0.50
<b>Total . . . . .</b>	<b>43.14</b>	<b>58.83</b>	<b>17.75</b>	<b>19.47</b>	<b>21.54</b>	<b>8.11</b>	<b>26.50</b>	<b>199.09</b>

(a) Grants less fees received.

(b) State details of expenditure on this item are not yet separately available.

*Grants for technical training.* These grants are made under the *States Grants (Technical Training) Acts* 1964, 1965, 1968 and 1971. The grants are for capital expenditure on buildings and equipment for use in technical training. 'Technical training' means the training of persons for engagement in trades, technical occupations, and agricultural or other rural occupations below the tertiary level. From the time the scheme began in July 1964 to June 1971 the following amounts were advanced to the States, the allocation being based on total population.

**TECHNICAL TRAINING: COMMONWEALTH GRANTS TO THE STATES**  
**FOR THE PERIOD JULY 1964 TO JUNE 1971**  
(\$'000)

N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	All States
26,103	19,766	10,162	6,601	5,055	2,313	70,000

The scheme was extended for a further three years ending 30 June 1974. Maximum Commonwealth grants to the States for the triennium ending 30 June 1974 are shown in the following table.

**TECHNICAL TRAINING: MAXIMUM COMMONWEALTH GRANTS**  
**FOR THE TRIENNium ENDING 30 JUNE 1974**  
(\$'000)

N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	All States
13,320	10,030	5,250	3,390	2,870	1,140	36,000

For details of grants to the States for technical training during 1970-71, see page 665.

*Grants for teachers colleges.* The scheme commenced on 1 July 1967, and was extended for a further three years with available funds increasing from \$24 million for the 1967-70 triennium to \$30 million for the 1970-73 triennium. The grants to teachers colleges are for capital expenditure on approved building projects including the planning, erection, alteration and extension of a building plus the necessary furniture and equipment. The *States Grants (Teachers Colleges) Acts* 1967 and 1970 provide that 10 per cent of places (new or replacement) resulting from the expenditure of Commonwealth grants must be available for private students, i.e. students not bonded to State education departments. (For full details of the Commonwealth's role in teacher education, reference should be made to the report issued in 1972 of the Senate Standing Committee on Education, Science and the Arts.)



**TEACHERS COLLEGES: ALLOCATIONS OF COMMONWEALTH GRANTS  
FOR SIX YEARS ENDING 30 JUNE 1973**

(\$'000)

<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>All States</i>
17,400	14,850	6,780	6,800	5,600	2,570	54,000

It is estimated that the expenditure of Commonwealth grants on teachers colleges provided 5,677 places (4,371 new and 1,306 replacement places) during the period 1967-68 to 1969-70 and it will provide 6,000 places (3,520 new and 2,480 replacement places) during the period 1970-71 to 1972-73.

For details of Commonwealth grants for teachers colleges during the period 1967-68 to 1970-71, see page 665.

The Commonwealth also decided to support the introduction of teacher education into the colleges of advanced education and to provide funds for this purpose under the normal sharing arrangements for expenditure on colleges of advanced education in the States. During the triennium ending 30 June 1974, teacher training will be supported at the following colleges of advanced education: the Mitchell (Bathurst) and Riverina (Wagga) Colleges of Advanced Education in New South Wales; the Queensland Institute of Technology, Darling Downs (Toowoomba) and Capricornia (Rockhampton), and the Launceston and Hobart branches of the Tasmanian College of Advanced Education. Teacher education commenced at the Canberra College of Advanced Education in 1971.

*Pre-school teachers colleges grants.* In 1968 the Commonwealth provided \$2,500,000 for capital expenditure on approved building projects in connection with the provision of pre-school or kindergarten teacher training facilities. An approved building project includes planning, erection, alteration of a building plus the necessary furniture and equipment. The primary purpose of the grants was to double the capacity of the colleges for the training of pre-school teachers.

While pre-school teacher training is a function of the State Education Department in Tasmania, in the other States it is administered by the private organisations shown in the table below. The Commonwealth's allocations made under the *States Grants (Pre-school Teachers Colleges) Act* 1968, were as follows.

**PRE-SCHOOL TEACHERS COLLEGES: AMOUNTS GRANTED TO EACH STATE  
ORGANISATION RESPONSIBLE—1968**

(\$)

<i>State</i>	<i>Name of college</i>	<i>Body of trustees conducting or owning property of college</i>	<i>Amount</i>
New South Wales	Nursery School Teachers College	The Sydney Day Nursery and Nursery Schools Association Incorporated	650,000
	Sydney Kindergarten Teachers College	The Kindergarten Union of New South Wales Incorporated	225,000
Victoria	Melbourne Kindergarten Teachers College	The Trustees of the Melbourne Kindergarten Teachers College	210,000
Queensland	Brisbane Kindergarten Teachers College	The Creche and Kindergarten Association of Queensland	350,000
South Australia	The Kindergarten Teachers College	The Kindergarten Union of South Australia, Incorporated	670,000
Western Australia	Meerilinga Kindergarten Teachers College	Kindergarten Association of Western Australia, Incorporated	175,000
Tasmania	Launceston Teachers College		220,000
<b>Total</b>			<b>2,500,000</b>

When the approved building projects are completed the number of places available at pre-school teacher training colleges will be 1,750, an increase of 1,024 places since 1967.

*Per capita grants to independent (i.e. non-government) schools.*

The *States Grants (Independent Schools) Act* 1969 provided for the introduction in 1970 of special purpose grants to be made to the States for transmission to independent schools (non-government) as a per capita contribution from the Commonwealth towards their recurrent expenditure. The Act also provided for the payment of per capita grants for students attending non-government special schools for handicapped children.

The per capita grants per student during 1970, 1971 and 1972 are as follows.

**RATES OF PER CAPITA GRANTS PAID TO  
INDEPENDENT (NON-GOVERNMENT) SCHOOLS  
DURING 1970 TO 1972  
(\$)**

<i>Type of student</i>			1970	1971	1972
Primary	..	..	35	35	50
Secondary	..	..	50	50	68

*Australian Capital Territory and Northern Territory.* The Commonwealth Government provides a per capita grant to non-government schools in the Australian Capital Territory and the Northern Territory on the same basis as that shown above plus a local component which is broadly equivalent to the per capita grants paid by the State governments to non-government schools in the States. The local per capita component paid during 1972 is as follows: primary students \$35, secondary students, forms 1 to 4 \$45, forms 5 and 6 \$50.

Non-government schools in the Australian Capital Territory and the Northern Territory also receive grants for science facilities and for school libraries in conjunction with the capital aid scheme under which the Commonwealth Government meets interest charges on loans and also repays, in equal annual instalments, the costs for school building projects. For details of payments made under the Act during 1970-71, see page 667.

For details of the total amounts of per capita grants paid to independent (non-government) schools, see page 665.

*Grants for science laboratories.* From July 1964 to June 1975, \$123.3 million will have been distributed to the States in unmatched grants for science buildings and equipment in government and non-government secondary schools. Grants to State schools have been provided on the basis of proposed programmes agreed to between the Commonwealth and State Ministers of Education. Grants to independent schools are approved by the Commonwealth Minister for Education and Science in accordance with their entitlement to assistance and on the basis of reports by an Advisory Committee on Standards for Science Facilities in Independent Schools; State advisory committees representing independent schools allocate priorities within their own State.

*Grants for library facilities in secondary schools.* During the three-year period January 1969 to December 1971, the Commonwealth distributed \$27 million for the development of library facilities (erection, alteration or extension of library buildings and provision of furniture, equipment, books, and library materials) in government and non-government secondary schools in the States. A further \$30 million has been provided for the same purposes in the 1972-74 triennium. Besides the Commonwealth Secondary Schools Libraries Committee, the Commonwealth, as with the science facilities scheme, has the advice of two advisory committees in each State, one representative of Roman Catholic secondary schools and the other representative of other non-government secondary schools. The maximum amounts available to the States during the present triennium are shown below. For details of payments made under the Act during 1970-71, see page 665.

**SECONDARY SCHOOL LIBRARIES: MAXIMUM COMMONWEALTH  
GRANTS FOR THE TRIENNium ENDING 31 DECEMBER 1974  
(\$'000)**

<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>All States</i>
10,897	9,292	4,015	2,691	2,048	1,056	30,000

Following the Commonwealth contribution, in 1968–69, towards meeting the urgent need for more trained librarians to staff the new and existing libraries, further funds were made available during the period 1969–70 to 1971–72. These funds enabled the Commonwealth to sponsor several short specialist courses in various aspects of school librarianship in conjunction with State education departments and other interested organisations. During 1970–71, 1,145 principals, librarians and teachers from government and non-government schools, as well as teachers college lecturers and principals, educational administrators, and university and advanced college teacher training staff, attended courses. Expenditure in connection with the courses during the period 1968–69 to 1971–72 totalled approximately \$143,000.

### Expenditure on education

The statistics in this section are intended to give a broad indication of the extent and direction of both government and private effort in the field of education in recent years. They have been compiled in accordance with national accounting concepts, and, apart from some minor revisions which have been incorporated where later information became available, are consistent with the estimates included in *Australian National Accounts*, 1970–71 (No. 7.1). These figures can therefore be related to other national accounts aggregates. For explanation of the relevant national accounting concepts, reference should be made to *Australian National Accounts*, 1970–71 and also to *Public Authority Finance: Commonwealth Authorities*, 1970–71 (No. 5.12), from which figures included in this section have also been taken.

The emphasis given in this section to the outlays of the public sector in part reflects the relative importance of that sector in the provision of education services, but is also a reflection of lack of detailed information relating to educational activities in the private sector. Sufficient information is given, however, to show the order of magnitude of private sector spending, and also to show aggregate demand for education services and facilities.

#### Public authority sector

The figures which follow form part of a comprehensive statistical programme to reclassify the transactions recorded in the 'conventional' accounts of all public authorities into a national accounting presentation. As part of this programme, the outlay of public authorities is classified by *function*, so as to reveal the broad purposes for which the public authorities undertake expenditure programmes. These figures relate to those outlays which have been identified as being primarily designed to serve the purposes of 'education', broadly as defined in the United Nations System of National Accounts. Included therefore are outlays on administration and regulation of school systems and institutions of higher learning and educational research; on provision, inspection and support of primary and secondary schools, colleges and universities, technical training institutions, schools for the handicapped, adult education facilities, pre-school centres, etc.; on scholarships, research grants, etc.; and on subsidiary services such as transportation of school children and fare concessions. Expenditures on school medical and dental services and provision of free milk for school-children are not included, as these are regarded as primarily serving the purpose of health.

Application of this, or any other, definition of 'education' is far from being a straightforward matter. A particular item of expenditure may serve two or more distinct functions, and there is likely to be a degree of arbitrariness in deciding which is the primary function—the items referred to at the end of the previous paragraph are illustrative of this problem. In other cases a recorded expenditure figure may relate to more than one function, but it may be very difficult in practice to separate them. Military colleges serve both defence and education functions. The usual practice is to classify these organisations to defence: but this practice may be of doubtful validity in the case of military colleges which are affiliated with universities. There are similar problems with the education of nurses. An initial difficulty here is that of satisfactorily identifying these expenditures in the accounts of hospitals. But even if that problem could be overcome there would still be some question as to whether this expenditure should belong in education or health. The lack of separate data decides the issue for the present—expenditure on the education of nurses in hospitals is classified to health—but the development of tertiary level courses in nursing at colleges of advanced education must eventually lead to reconsideration of this approach. There is also a problem in allocating these expenditures between the public and private sectors. Similar difficulties exist with post-graduate medical education. Another class of borderline cases relates to in-service training schemes. Here the usual practice is to classify expenditures to the primary function of the organisation providing the training: therefore all expenditures on cadetship schemes are treated in this way. Allowances paid to trainee teachers are regarded as in-service training expenditures—but in this case the primary



function of their employers happens to be education, so that these expenditures are included in the figures in this statement. Expenditure on research by universities cannot be clearly separated from expenditures related to teaching; all expenditure by universities is therefore classified to education.

Apart from giving emphasis to the broad purposes of public sector outlays, a national accounting presentation of the transactions of public authorities is also designed to facilitate the study of their impact on the rest of the economy. In the following tables the outlays of the public authorities engaged in providing education services or financing their provision by other bodies, public or private, have accordingly been broken into: broad categories of final expenditure on goods and services (i.e. net current expenditure, and expenditure on new fixed assets); capital financing items (e.g. net expenditure on existing assets); transfers to the private sector (cash benefits, grants for private capital purposes) which become a source of finance for that sector's own final expenditures; and transfers between public authorities (Commonwealth grants to the States).

Detailed analyses have not been prepared of the accounts of all public authorities providing or financing education services, but methods of analysis have been adopted which reflect the net effect of the transactions of authorities not fully analysed (such as the State universities). Private non-profit organisations are covered by recording their net current expenditure on goods and services as final expenditure by public authorities and persons: that is, the current grants to these organisations by public authorities are treated as public authorities' final expenditure, and fees, donations, etc. paid to them by persons are included in personal consumption expenditure. Current expenditure of non-profit organisations is therefore covered, being approximately equal to their income from grants and fees. For reasons of practicality, grants for capital purposes by public authorities to private non-profit organisations are treated as transfers, so that the capital expenditure of these organisations is wholly recorded in the private sector.

Local authorities have no responsibility for the provision of education services, and only participate in this field of activity to the extent of providing some support to pre-school centres in some States. These expenditures have been included in the figures for the public sector given in the last table in this section, but their impact is negligible. To all intents and purposes therefore the outlays of Commonwealth authorities and State authorities shown in the following tables may be taken together as constituting the outlay on education by all public authorities.

#### Commonwealth authorities

Details of outlay on education by Commonwealth authorities are given in the following table.

COMMONWEALTH AUTHORITIES: OUTLAY ON EDUCATION, 1966-67 TO 1970-71  
(\$'000)

	1966-67	1967-68	1968-69	1969-70	1970-71
Current outlay—					
Net current expenditure on goods and services—					
Department of Education and Science . . . . .	2,113	2,852	3,744	4,972	6,959
Australian Universities Commission . . . . .	195	197	217	229	223
Australian Capital Territory education services(a) . . . . .	4,980	5,780	6,767	7,853	10,184
Northern Territory education services(a) . . . . .	1,794	3,432	4,579	5,541	7,701
Australian National University . . . . .	12,852	15,019	17,381	19,842	27,237
Canberra College of Advanced Education . . . . .	..	43	267	936	1,653
Child migrant education scheme . . . . .	..	..	..	82	1,698
Australian Broadcasting Commission—School broadcasts, etc. . . . .	888	817	873	902	970
Melbourne University—Meteorology . . . . .	12	12	12	12	12
Sydney University—School of Public Health and Tropical Medicine, etc. . . . .	547	623	628	743	822
Non-government schools—assistance(a) . . . . .					
Australian Capital Territory . . . . .	274	377	629	787	1,232
Northern Territory . . . . .	..	17	30	86	157
<i>Total</i> . . . . .	23,655	29,172	35,126	41,785	58,849
Cash benefits to persons—					
Commonwealth scholarship scheme—					
Post-graduate . . . . .	2,432	2,899	3,588	4,526	5,209
University . . . . .	13,890	13,383	16,268	18,160	22,519
Advanced education . . . . .	660	754	1,001	1,628	2,793
Secondary . . . . .	6,243	6,474	6,558	6,738	6,791
Technical . . . . .	816	1,031	1,123	1,162	1,096
Soldiers' children education scheme . . . . .	2,462	2,720	3,154	3,203	3,407
Aboriginal study grants . . . . .	..	..	62	190	326
Aboriginal secondary grants . . . . .	..	..	..	522	2,201
Other(b) . . . . .	680	719	753	854	941
<i>Total</i> . . . . .	27,184	27,979	32,508	36,982	45,283

For footnotes see end of table.



COMMONWEALTH AUTHORITIES: OUTLAY ON EDUCATION, 1966-67 TO 1970-71—*continued*  
(\$'000)

	1966-67	1967-68	1968-69	1969-70	1970-71
Grants for private capital purposes—					
Non-government schools—					
Australian Capital Territory . . . . .	170	50	397	841	688
Northern Territory . . . . .	7	6	7	32	145
Residential colleges—Australian National University . . . . .	80	1,435	428	196	990
Aboriginal advancement . . . . .	..	129	31	229	188
<i>Total . . . . .</i>	<i>257</i>	<i>1,619</i>	<i>863</i>	<i>1,298</i>	<i>2,011</i>
Transfers overseas(c) . . . . .	726	791	801	941	1,017
Grants to the States—					
Universities . . . . .	34,262	39,912	43,534	50,436	58,877
Colleges of advanced education . . . . .	2,472	5,273	6,282	10,658	15,743
Australian Research Grants Committee grants . . . . .	2,038	3,154	2,879	3,446	4,170
Non-government schools—per capita grants . . . . .	..	..	..	12,177	24,253
Aboriginal advancement . . . . .	..	..	151	289	273
<i>Total . . . . .</i>	<i>38,771</i>	<i>48,338</i>	<i>52,846</i>	<i>77,005</i>	<i>103,317</i>
<i>Total current outlay . . . . .</i>	<i>90,593</i>	<i>107,899</i>	<i>122,144</i>	<i>158,011</i>	<i>210,477</i>
Capital outlay—					
Expenditure on new fixed assets—					
Department of Education and Science . . . . .	9	48	125	55	59
Australian Capital Territory education services . . . . .	4,549	4,801	4,741	6,833	5,594
Northern Territory education services . . . . .	1,274	1,958	1,710	5,604	4,810
Australian National University . . . . .	4,275	6,285	5,664	3,402	5,940
Canberra College of Advanced Education . . . . .	25	439	808	1,501	2,426
Child migrant education scheme . . . . .	..	..	..	27	147
Sydney University—School of Public Health and Tropical Medicine, etc. . . . .	76	112	113	110	79
<i>Total . . . . .</i>	<i>10,208</i>	<i>13,644</i>	<i>13,160</i>	<i>17,533</i>	<i>19,055</i>
Grants to the States—					
Universities . . . . .	16,354	16,329	19,097	17,233	16,346
Colleges of advanced education . . . . .	3,681	6,647	8,080	9,486	14,837
Teacher training colleges . . . . .	..	4,518	6,322	13,160	2,470
Pre-school teachers' colleges . . . . .	..	..	170	309	856
Science laboratories . . . . .	10,163	12,587	11,762	12,898	13,062
School libraries . . . . .	..	..	1,703	7,540	13,257
Technical training facilities . . . . .	9,894	13,877	7,587	9,878	12,535
Aboriginal advancement . . . . .	..	..	656	655	672
<i>Total . . . . .</i>	<i>40,092</i>	<i>53,958</i>	<i>55,377</i>	<i>71,160</i>	<i>74,034</i>
<i>Total capital outlay . . . . .</i>	<i>50,300</i>	<i>67,602</i>	<i>68,537</i>	<i>88,693</i>	<i>93,089</i>
<i>Total outlay on education . . . . .</i>	<i>140,893</i>	<i>175,501</i>	<i>190,681</i>	<i>246,704</i>	<i>303,566</i>

(a) For further details of outlay in the Territories, see p. 667. (b) Includes the following items: Forestry scholarships, C.S.I.R.O. research studentships, scholarships and allowances to students in the A.C.T. and special scholarships to students in the N.T., and Australian Agricultural Council scholarships. (c) Relates mainly to expenditure in connection with Commonwealth Educational Co-operation Scheme.

As may be seen from the table, Commonwealth outlays are directed very largely towards the financing of outlays on education by the States and the private sector. Direct expenditure by the Commonwealth relates mainly to the costs of administering its support programmes and its own educational research activities, the provision of education services in the internal territories, expenditures of statutory bodies (i.e. the Australian National University, the Canberra College of Advanced Education, and the Australian Broadcasting Commission), expenditure on the education of Aborigines by the Northern Territory administration, and the costs of the child migrant education programme.

## Grants to the States

Financial assistance to the States specifically for education purposes constitutes the major item of outlay on education by the Commonwealth. The allocation of the various categories of grants to individual States in 1970-71 is shown in the following table. The grants themselves have been described earlier, *see* pages 657-63.

**COMMONWEALTH AUTHORITIES: GRANTS TO THE STATES  
SPECIFICALLY FOR EDUCATION PURPOSES, 1970-71**  
(\$'000)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas. All States</i>	
<b>Current—</b>							
Research grants . . . . .	1,565	954	395	759	296	202	4,170
Universities . . . . .	23,594	16,238	7,517	5,811	3,900	1,818	58,878
Colleges of advanced education	3,478	6,191	1,567	1,420	2,333	754	15,743
Non-government schools—per capita grants . . . . .	9,017	7,832	3,640	1,526	1,682	556	24,253
Aboriginal advancement . . . . .	135	65	13	28	26	7	273
<i>Total current . . . . .</i>	<i>37,789</i>	<i>31,280</i>	<i>13,132</i>	<i>9,544</i>	<i>8,237</i>	<i>3,337</i>	<i>103,317</i>
<b>Capital—</b>							
Universities . . . . .	4,050	5,990	3,124	2,369	384	429	16,346
Colleges of advanced education	4,068	4,902	1,097	2,353	1,903	514	14,837
Technical training . . . . .	4,846	3,912	1,457	1,191	804	325	12,535
Teacher training colleges . . . . .	546	1,250	431	140	3	100	2,470
Science laboratories—							
Government schools . . . . .	2,684	2,041	1,389	692	530	390	7,726
Non-government schools . . . . .	1,979	1,505	778	510	391	174	5,336
School libraries . . . . .	5,990	3,199	1,466	1,343	779	480	13,257
Pre-school teachers colleges . . . . .	25	1	350	480	..	..	856
Aboriginal advancement . . . . .	11	..	327	84	250	..	672
<i>Total capital . . . . .</i>	<i>24,199</i>	<i>22,800</i>	<i>10,419</i>	<i>9,162</i>	<i>5,044</i>	<i>2,411</i>	<i>74,034</i>
<b>Total outlay . . . . .</b>	<b>61,988</b>	<b>54,079</b>	<b>23,550</b>	<b>18,706</b>	<b>13,282</b>	<b>5,750</b>	<b>177,351</b>

**Outlay on education in the internal territories**

As mentioned previously, the Commonwealth Government is responsible for the provision of education services in the Australian Capital Territory and the Northern Territory. Details of Commonwealth outlay on education in the Territories are given below; further information may be found in Chapter 28, The Territories of Australia.

**COMMONWEALTH AUTHORITIES: OUTLAY ON EDUCATION  
IN THE INTERNAL TERRITORIES, 1970-71**

(\$'000)

<i>Australian Capital Territory</i>		<i>Northern Territory</i>	
<b>Current outlay—</b>		<b>Current outlay—</b>	
Current expenditure on goods and services—		Current expenditure on goods and services—	
Australian Capital Territory education services—		Northern Territory education services—	
Government schools and colleges—		Government schools and colleges—	
Pre-schools . . . . .	424	Pre-schools . . . . .	261
School transport . . . . .	478	School transport . . . . .	335
Repairs and maintenance . . . . .	260	Repairs and maintenance . . . . .	146
Payment to N.S.W. Department of Education . . . . .	7,150	Commonwealth Teaching Service Payment to S.A. Department of Education, and teacher moving expenses . . . . .	3,462
Canberra Technical College . . . . .	1,016	Other . . . . .	588
School of Music . . . . .	101	Non-government schools—	
Other . . . . .	925	Student allowances . . . . .	76
Non-government schools—		Assistance for buildings . . . . .	81
Student allowances . . . . .	616	<b>Total . . . . .</b>	<b>5,099</b>
Assistance for buildings . . . . .	615	<b>Less receipts—Technical education and other . . . . .</b>	<b>14</b>
<b>Total . . . . .</b>	<b>11,585</b>	<b>Net current expenditure . . . . .</b>	<b>5,085</b>
<b>Less receipts—Technical education and other . . . . .</b>	<b>169</b>	Aboriginal advancement . . . . .	2,773
<b>Net current expenditure . . . . .</b>	<b>11,416</b>	<b>Total net current expenditure . . . . .</b>	<b>7,858</b>
Canberra College of Advanced Education . . . . .	1,653		
<b>Total net current expenditure . . . . .</b>	<b>13,069</b>		
<b>Cash benefits to persons—</b>		<b>Cash benefits to persons—</b>	
University scholarships(a) . . . . .	58	Northern Territory Scholarships . . . . .	204
Secondary school bursaries and textbook allowances(a) . . . . .	100		
<b>Total cash benefits . . . . .</b>	<b>158</b>		
<b>Grants for private capital purposes—</b>		<b>Grants for private capital purposes—</b>	
Non-government schools, capital works . . . . .	688	Non-government schools, capital works . . . . .	145
<b>Total current outlay . . . . .</b>	<b>13,915</b>	<b>Total current outlay . . . . .</b>	<b>8,207</b>
<b>Capital outlay—</b>		<b>Capital outlay—</b>	
Expenditure on new fixed assets—		Expenditure on new fixed assets—	
Australian Capital Territory education services—		Northern Territory education services—	
Government schools and colleges—		Government schools and colleges—	
Pre-schools . . . . .	41	New buildings and works . . . . .	4,068
Primary schools . . . . .	2,300	Plant and equipment . . . . .	124
Secondary schools . . . . .	2,540	Furniture and fittings . . . . .	45
Canberra Technical College . . . . .	30	<b>Total . . . . .</b>	<b>4,237</b>
Plant and equipment . . . . .	160	Aboriginal advancement . . . . .	573
Furniture and fittings . . . . .	237	<b>Total capital outlay . . . . .</b>	<b>4,810</b>
Other building and related expenditure . . . . .	286	<b>Total outlay . . . . .</b>	<b>13,017</b>
<b>Total . . . . .</b>	<b>5,594</b>		
Canberra College of Advanced Education . . . . .	2,426		
<b>Total capital outlay . . . . .</b>	<b>8,020</b>		
<b>Total outlay(b) . . . . .</b>	<b>21,935</b>		

(a) Excludes Commonwealth Secondary and Technical Scholarships.

(b) Excludes the Australian National University.

## State authorities

The following table shows the outlay on education by State authorities, financed from their own resources (including general purpose grants from the Commonwealth), and from Commonwealth grants for education purposes.

**STATE AUTHORITIES: OUTLAY ON EDUCATION**  
1966-67 TO 1970-71

(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71
Net current expenditure on goods and services—					
New South Wales . . . . .	208	228	252	299	n.a.
Victoria . . . . .	163	187	217	257	
Queensland . . . . .	61	71	83	99	
South Australia . . . . .	58	64	71	82	
Western Australia . . . . .	44	50	57	71	
Tasmania . . . . .	21	24	26	30	
<i>Total</i> . . . . .	555	625	706	838	1,010
Expenditure on new fixed assets—					
New South Wales . . . . .	65	60	73	75	n.a.
Victoria . . . . .	46	54	55	60	
Queensland . . . . .	16	16	24	26	
South Australia . . . . .	16	15	18	21	
Western Australia . . . . .	13	15	15	20	
Tasmania . . . . .	4	5	7	7	
<i>Total</i> . . . . .	160	165	191	209	236
Expenditure on existing assets . . . . .	1	..	..	1	..
Cash benefits to persons . . . . .	13	17	22	27	27
Grants for private capital purposes . . . . .	4	8	7	9	10
<b>Total outlay on education</b> . . . . .	<b>733</b>	<b>815</b>	<b>926</b>	<b>1,084</b>	<b>1,283</b>
<i>of which—</i>					
New South Wales . . . . .	280	298	338	389	n.a.
Victoria . . . . .	213	247	278	323	
Queensland . . . . .	80	92	113	132	
South Australia . . . . .	75	80	90	107	
Western Australia . . . . .	59	67	75	94	
Tasmania . . . . .	26	29	33	38	



**All public authorities**

The outlay on education of all public authorities consists of the final expenditure on goods and services of the Commonwealth and State authorities and transfers by these authorities to the private sector. These figures are brought together in the following table, and are related to the total outlay (on all functions) by all public authorities to give an indication of the share of government resources devoted to education.

**OUTLAY ON EDUCATION: ALL PUBLIC AUTHORITIES**  
**1966-67 TO 1970-71**  
(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71
<b>Commonwealth authorities—</b>					
Net current expenditure on goods and services . . . . .	24	29	35	42	58
Cash benefits to persons . . . . .	27	28	33	37	45
Transfers overseas . . . . .	1	1	1	1	1
Grants for private capital purposes . . . . .	..	2	1	1	2
Expenditure on new fixed assets . . . . .	10	14	13	18	18
<b>Grants to the States—</b>					
Current . . . . .	39	48	53	77	103
Capital . . . . .	40	54	55	71	74
<i>Total Commonwealth</i> . . . . .	<i>141</i>	<i>176</i>	<i>191</i>	<i>247</i>	<i>302</i>
<b>State authorities—</b>					
Net current expenditure on goods and services . . . . .	555	625	706	838	1,010
Cash benefits to persons . . . . .	13	17	22	27	27
Grants for private capital purposes . . . . .	4	8	7	9	10
Expenditure on new fixed assets . . . . .	160	165	191	209	236
Expenditure on existing assets . . . . .	1	..	..	1	..
<i>Total State</i> . . . . .	<i>733</i>	<i>815</i>	<i>926</i>	<i>1,084</i>	<i>1,283</i>
<i>less Grants from Commonwealth for education purposes</i> . . . . .	<i>79</i>	<i>102</i>	<i>108</i>	<i>148</i>	<i>177</i>
<b>Outlay financed from States' own resources and from non-specific Commonwealth grants</b> . . . . .	<b>654</b>	<b>713</b>	<b>818</b>	<b>936</b>	<b>1,106</b>
<i>Total outlay on education</i> . . . . .	<i>795</i>	<i>889</i>	<i>1,009</i>	<i>1,183</i>	<i>1,408</i>
<b>Total outlay on all functions</b> . . . . .	<b>7,346</b>	<b>8,108</b>	<b>8,656</b>	<b>9,733</b>	<b>10,572</b>
	per cent	per cent	per cent	per cent	per cent
<b>Outlay on education as percent of total outlay</b> . . . . .	<b>10.8</b>	<b>11.0</b>	<b>11.7</b>	<b>12.2</b>	<b>13.3</b>

**Total expenditure on education**

Total expenditure on education can be measured by adding to the outlay of the public sector (as shown in the previous table) the final expenditure on education which the private sector finances from its own resources, or alternatively by adding together the final expenditures of both sectors (i.e. by consolidating out the public authority transfers, and also any net transactions in existing assets).

Final expenditure on education by the private sector consists of personal consumption expenditure on education services, and expenditure on new fixed assets—mainly by private non-profit organisations, and financed in part by the grant from public authorities for private capital purposes. These grants are treated as transfers rather than final expenditure of public authorities as with the current grants, and are recorded as a source of funds for capital formation in the national capital account. Personal consumption expenditure on education services is an estimate of fees paid by persons to government schools (mainly technical and agricultural colleges), fees and gifts to universities and school fees (other than boarding fees) paid to non-government schools, business colleges, etc., and is based largely on information relating to fees charged and enrolments at these institutions. Expenditure on such items as school books, uniforms, etc. and expenditure by parents associations on school equipment are included in categories other than education services (such as clothing, etc., newspapers, books, etc., and household durables). Private gross fixed capital expenditure in the field of education is estimated from statistics of the value of work done on new building and major additions to buildings of private educational institutions.

Estimates for these items of final expenditure of the private sector have been combined with the figures for public sector expenditure in the following table to provide a measure of total expenditure on education. This latter item may also be regarded as a measure of the aggregate demand for education services and facilities by the community and can therefore be related to the supply of goods and services available from domestic production (i.e. gross national product). This relationship is shown in the table as an indicator of total community effort in the field of education.

**EXPENDITURE ON EDUCATION: AUSTRALIA 1966-67 TO 1970-71**  
(\$ million)

	1966-67	1967-68	1968-69	1969-70	1970-71
<b>Public authority sector—</b>					
Net current expenditure on goods and services . . . . .	579	654	741	880	1,068
Expenditure on new fixed assets . . . . .	170	179	204	227	254
<i>Total expenditure (1)</i> . . . . .	749	833	945	1,107	1,322
Transfers to the private sector and expenditure (net) on existing assets . . . . .	46	56	64	76	85
<i>Total outlay</i> . . . . .	795	889	1,009	1,183	1,408
<b>Private sector—</b>					
Personal consumption expenditure . . . . .	119	133	144	156	173
Expenditure on new fixed assets . . . . .	35	31	27	37	46
<i>Total expenditure (2)</i> . . . . .	154	164	171	193	219
<i>less</i> transfers from public authorities and sales (net) of existing assets . . . . .	46	56	64	76	85
Expenditure financed from the private sector's own resources . . . . .	108	108	107	117	134
<i>Total expenditure on education (1) and (2)</i> . . . . .	903	997	1,116	1,300	1,541
<b>Gross National Product</b> . . . . .	22,757	24,279	27,215	30,071	33,087
	per cent	per cent	per cent	per cent	per cent
Expenditure on education as percent of Gross National Product . . . . .	4.0	4.1	4.1	4.3	4.7

## CULTURAL ACTIVITIES

## Cultural organisations

## Australian Council for the Arts

The Australian Council for the Arts commenced operation in 1968 as the Commonwealth Government's adviser on financial support for the arts and on policies for their development throughout Australia. The Council provides basic support for State drama companies, national touring companies such as the Australian Ballet and the Australian Opera, regional organisations such as the West Australian Ballet and the Queensland Opera Company, and the three federal co-ordinating and entrepreneurial organisations—the Australian Elizabethan Theatre Trust, Arts Council of Australia and Musica Viva. The National Institute of Dramatic Art and the Australian Ballet School are largely supported by the Australian Council.

In addition to grants which are given on an annual basis, a number of programmes have been set up from which assistance is given throughout the year, and applications for assistance are invited through regular advertising in the national press. A training programme helps to train theatre personnel as well as artists, a research programme examines the needs of the arts and suggests new areas for assistance, and an international programme enables Australians to have the opportunity of seeing overseas companies and Australian companies to travel overseas. In addition a development fund assists a wide variety of projects throughout Australia in the fields of drama, Aboriginal arts, music, festivals, film and television, youth and education as well as assisting Australians engaged in the performing arts to spend a period abroad for additional training. A special projects fund enables new areas of assistance to be developed, for example craft programmes and community programmes, as well as assisting multi-media and environmental work.

## Australian Ballet Foundation

The Australian Ballet Foundation was formed in 1961 by the Australian Elizabethan Theatre Trust and J. C. Williamson Theatres Ltd to establish a national ballet company, which gave its first performance on 2 November 1962.

The establishment of a permanent Australian company, the appearance of the world's leading artists with the company, the commissioning of works by Australian composers, choreographers and designers and presentation of the company overseas were achieved within the first three years.

The Australian Ballet receives subsidies from the Federal Government (through the Australian Council for the Arts), the six State Governments and the major municipal bodies (through the Australian Elizabethan Theatre Trust). It also receives support from private corporations and individuals. The Australian Ballet has its headquarters and studios in Melbourne.

## Australian Opera

The Australian Opera was created in 1956 under the auspices of The Australian Elizabethan Theatre Trust to form the basis of a national touring opera company. It was known as The Elizabethan Trust Opera Company until the end of 1969 when The Australian Opera formed its own Board of Directors. In its early years the company retained only a core of full-time administrative officers and engaged its singers for each annual season. These seasons involved the presentation of three operas in most years and a tour circuit covering each State of the Commonwealth. In addition small country touring companies travelled through New South Wales, Queensland, Victoria and South Australia. It currently employs a chorus of thirty-eight singers, and forty-three principal singers on a permanent basis and a total administrative, technical and music staff of thirty people. It uses on a year-round basis one of the two orchestras maintained by The Australian Elizabethan Theatre Trust.

In 1971 The Australian Opera gave 251 capital city performances (eleven different productions) and a touring company gave 51 performances of 'The Marriage of Figaro' in the four States previously mentioned.

The Australian Opera receives Government grants through the Australian Council for the Arts and the Australian Elizabethan Theatre Trust.

## Australian Elizabethan Theatre Trust

The Australian Elizabethan Theatre Trust, originally formed to present drama, opera, ballet and puppetry throughout Australia, has accorded full autonomy to most of the performing companies established by the Trust in its earlier years. The Marionette Theatre of Australia continues to operate under Trust administration. The Trust's major functions now are to supply certain financial guarantees to the independent performing companies; to maintain two orchestras to service the requirements



of the Australian Opera and the Australian Ballet; to administer the complex subscription booking systems on which both of these companies now operate; to maintain a Production Division executing costume and scenery designs; and to act as entrepreneur in the touring of theatre features from overseas and Australian sources.

The Trust receives annual grants from the Commonwealth Government, the State Governments, and some capital city councils and its revenue is supplemented by subscriptions from members and donations from business houses.

### **Arts Council of Australia**

The Arts Council of Australia has divisions (and more than 140 branches) in all State and Territories. A Federal Secretariat was opened in Canberra in 1969 but moved to Sydney in 1971.

The Federal Secretariat of the Arts Council and the Divisions receive funds from the Australian Council for the Arts. The Divisions also receive State Government assistance and some activities of the Council are supported financially by non-metropolitan local government bodies. The New South Wales Division is represented on the Adult Education Advisory Board in that State, and on the Music Committee of UNESCO. The Tasmanian Division is represented on, and works closely with, the Adult Education Board of that State.

The Arts Council works to bring the arts to country centres and metropolitan and country schools, and is also concerned with taking the arts to children. Tours by high standard companies in opera, ballet, drama, puppets, etc., operate throughout the year. The Arts Council works closely with regional companies in organising country tours for these bodies.

The Council handles a wide range of art exhibitions in city and country areas. Summer schools and other courses for drama, painting, pottery, music, and other arts are an established feature, as are weekend schools of drama, music, painting and pottery. Yearly drama festivals are conducted and school tours are organised.

### **Australian National Trusts**

The Australian National Trusts were founded to further the preservation of lands, places, buildings, works, and articles which are of national importance because of educational, aesthetic, historic, architectural, artistic, scientific, cultural, or other special interest.

The first Australian National Trust, the National Trust of Australia (New South Wales), was formed in 1945. Since then National Trusts have been formed in each of the other States. The Trusts in New South Wales, Queensland, South Australia, and Western Australia have statutory authority, and those in Victoria and Tasmania are incorporated under the Companies Act of their respective States. The Australian Council of National Trusts was incorporated in 1965 to co-ordinate the activities of the State National Trusts and represent them at the federal level and internationally.

Membership of the National Trusts is open to all individuals and organisations. Total membership throughout the Commonwealth is approximately 38,000. The Trusts are financed by members' subscriptions and donations from individuals and commercial and industrial organisations, the proceeds of charges for entry to Trust properties and the fund-raising activities of members, including inspections of historic houses. In all States the National Trusts receive some financial support from the State Governments. The Commonwealth supports the Council through an annual grant of \$5,000 for administrative purposes, and in 1972 a further annual grant of \$50,000 was approved, this grant being intended for capital expenditure on the basis of national priorities. The Commonwealth also provides support through taxation concessions.

The number of properties owned or controlled by the Trust exceeds sixty. These include houses, natural reserves, a powder magazine, a police station, a gaol, two paddle steamers and a hulk, a joss house, and a garden. The Trusts have also established a register of buildings (totalling several thousand) which they consider should be preserved in the national interest because of their historical and/or architectural significance.

### **Historic Memorials Committee**

The Historic Memorials Committee was established in 1911 for the purpose of securing portraits of distinguished Australians who had taken an active part in Federation. Later the Committee decided to obtain portraits of all Governors-General, Prime Ministers, Presidents of the Senate, Speakers of the House of Representatives, and other notable Australians. In addition the Committee has commissioned paintings recording special events connected with the Commonwealth Parliament.



The Committee comprises the Prime Minister (Chairman), the President of the Senate, the Speaker of the House of Representatives, the Vice-President of the Executive Council, the Leader of the Opposition, and the Leader of the Opposition in the Senate. The Committee is advised on the commissioning of portraits by the Commonwealth Art Advisory Board (*see below*).

#### **Commonwealth Art Advisory Board**

The Commonwealth Art Advisory Board is the Government's adviser on all matters pertaining to the visual arts. The Board is also responsible for the purchase of works of art for the National Collection which embraces historical and contemporary Australian works, contemporary art on a world-wide basis, art of the Pacific Basin, and art of South and South-East Asia. The National Collection will ultimately be housed in the proposed Australian National Gallery which is to be built in Canberra.

On behalf of the Government, the Board organises and finances exhibitions of Australian art overseas and contributes towards the cost of exhibitions from overseas which come to Australia under the patronage of State Art Galleries.

#### **Commonwealth Literary Fund and Advisory Board**

The Advisory Board gives expert advice on literary matters to a Committee of three parliamentarians which administers the Fund. The Committee is traditionally under the Chairmanship of the Prime Minister.

The Commonwealth Literary Fund's purpose is to assist and promote the development of Australian literature. The Fund awards fellowships each year to enable selected writers to devote themselves full-time to literary projects; such fellowships have a maximum value of \$8,000 each a year. Assistance is given to publishers for the publication of manuscripts considered to be of high literary merit and through State adult education authorities for programmes of lectures on Australian literature. The Fund also provides financial support to Australian literary magazines and operates a scheme of pensions for Australian writers of national stature.

#### **Advisory Board, Commonwealth Assistance to Australian Composers**

The Advisory Board, Commonwealth Assistance to Australian Composers, was established in 1967 to advise the Government on financial support for the composition of music in Australia and on the promotion of the work of Australian composers in Australia and abroad; the Advisory Board is the responsible Commonwealth body in all matters relating to these areas. The Advisory Board's activities in connection with direct assistance to composers include full-time fellowships for composing music, the maximum value of a full-time fellowship being \$8,000 a year; special projects grants with a maximum value of \$2,000 each a year; assistance for the commissioning of works by Australian composers and programmes for young composers.

In the matter of promoting the work of Australian composers the Advisory Board offers assistance for the publishing of music, the copying of scores, and the copying of parts of scores for performance; assistance towards the costs of recording Australian compositions; and assistance through State Adult Education authorities and other bodies for lecture/recitals, seminars, work shops, etc., aimed at developing interest in Australian music.

## **Film production**

#### **Australian National Film Board**

The Australian National Film Board advises the Minister for the Interior on matters concerned with the production, acquisition and distribution of films required by Commonwealth departments for use within Australia on important matters of national interest and welfare, such as school and adult education, rehabilitation, social development, international understanding, trade and tourist expansion, and immigration; and for dissemination abroad to expand trade and commerce with other countries, to encourage tourist traffic with Australia, to improve Australia's relations with other countries and, where necessary, to explain Australia's national policies, and to encourage immigration.

The Board has twelve members with the Secretary of the Department of the Interior as chairman, and the remainder representative of Commonwealth departments, State government instrumentalities, and other interested organisations.

#### **Commonwealth Film Unit**

The Film Division of the News and Information Bureau, Department of the Interior, is the official film production and distribution agency for Commonwealth departments and instrumentalities.

It is referred to as the Australian Commonwealth Film Unit. It distributes theatrical and television Film Unit productions in Australia and overseas through its representatives at Australian official posts. Non-theatrical distribution in Australia is arranged in co-operation with State film distribution agencies, and through the National Library of Australia.

The Film Unit produces films for general exhibition, as well as training and special purpose films. In 1971-72 the Film Unit produced approximately 139 reels of new films and 182 reels of foreign versions of existing films. While many films are released commercially abroad, the emphasis is on distribution of educational and information films through non-theatrical circuits. Selected films have been recorded in most Asian and European languages and in Esperanto and Pidgin.

In addition to films made on its own initiative, the Commonwealth Film Unit produces films under the sponsorship of, or with the co-operation of, Commonwealth departments and other government instrumentalities.

#### **Australian Film Development Corporation**

The *Australian Film Development Corporation Act 1970* provided for the establishment of an Australian Film Development Corporation to encourage the making of Australian cinematographic and television films and to encourage the distribution of such films within and outside Australia. The Corporation administers a fund which had an initial capital of one million dollars which is added to from time to time as the Government decides. The Corporation makes investments in films, makes loans to film and television producers, and will guarantee repayment of loans made to producers of Australian films.

#### **Australian Film and Television School**

Establishment of the Australian Film and Television School was announced in April 1972. It will offer courses in film and television production. Before the School is operating, an Interim Training Scheme will provide a twelve months basic film and television course to students with some experience in the media. The scheme will also include a series of advanced seminars for people already professionally engaged in the industry.

The Interim Council for the Australian Film and Television School administers a programme of assistance for projects of artistic and technical quality. Support is given to experimental film and television programmes, to television programmes of quality where special factors may inhibit channels commissioning them, to script development and to other general and educational projects such as festivals, workshops and filmmakers' publications.

### **Censorship**

#### **National Literature Board of Review**

The National Literature Board of Review was established in 1968, following Commonwealth-State agreement, to achieve uniformity in the administration of laws relating to blasphemous, indecent or obscene publications of *prima facie* literary, artistic or scientific merit. In terms of the agreement the Board is established under the Customs (National Literature Board of Review) Regulations. Appropriate Ministers of any State may, under the Agreement, refer works published or distributed locally to the Board for advice. Subject to retention of final responsibility by each Minister it is the intention of the Governments concerned not to act against a publication of merit which the Board advises is suitable for distribution in Australia.

#### **Film censorship**

The Commonwealth Government's powers over censorship of films under the Customs Act extend only to imported films and imported advertising matter. Under that Act the Customs (Cinematograph Films) Regulations provide for the appointment of a Film Censorship Board whose function is to ensure that films and related advertising material coming within certain defined categories are not admitted into Australia. The censorship organisation comprises the Censorship Board of seven persons and a Cinematograph Films Board of Review, with headquarters in Sydney. Importers have a right of appeal to the Minister.

All States have agreed with the Commonwealth that the Commonwealth Film Censorship Board and the Cinematograph Films Board of Review are the censorship authorities for the purpose of the State Acts and have agreed to vest in these Boards the power to classify films as suitable for general exhibition or not. The authority to censor films made in Australia for commercial exhibition and advertising is given to the Commonwealth Board by the State Acts.

*Thirty-five mm films for exhibition in picture theatres.* In 1971, 1,356 films comprising approximately 6.5 million feet, were examined. This represented approximately 1,203 hours screening time. Of these films, 388 originated in the United Kingdom, 269 in the United States of America and 699 in other countries. Principal suppliers among the last mentioned were: U.S.S.R. (160), Italy (65), France (55), and Greece (52). Included in these figures were 600 full-length feature films which constitute the main theatrical attractions. Principal suppliers were: the United States of America (177), the United Kingdom (101), U.S.S.R. (82), Italy (53), France (43), Greece (40), and Japan (21). Forty feature films were rejected and cuts were made from 104. There were 30 appeals; 19 against rejection, 5 against proposed eliminations and 6 against rejection of advertising material. Nine appeals were allowed and 21 disallowed. Feature films classified as suitable for general exhibition numbered 115, and 407 were considered not suitable for children. Of the latter, 36 films were awarded the 'R' (Restricted) certificate and 154 were recommended for showing to mature audiences only. While the 'G' (General), 'N.R.C.' (Not Recommended for Children) and 'M' (Mature) classifications are advisory, children between the ages of 6 and 18 are excluded by law from seeing 'R' films. In addition to these imported films, 115 thirty-five mm films of 178,160 feet produced in Australia were cleared. These were mainly newsreels and documentaries intended for commercial exhibition or export.

*Sixteen mm films.* Excluding those imported for television use, 6,111 sixteen mm films of 5,089,020 feet were examined. These were films commercially produced for screening in theatres used by business undertakings for advertising and instructional purposes, and for screening in churches, schools and universities.

*Eight and 9.5 mm films.* Approximately 272,000 feet of 8 mm and 9.5 mm films were examined.

*Television films.* In 1971, 7,974 films for use on television, predominantly 16 mm, of approximately 11.32 million feet, were examined. The number of films is not a true indication of volume because many were of short duration and because these figures include a number of videotapes converted to their 16 mm cine film equivalents. In terms of screening time, the films and tapes censored for television amounted to approximately 5,242 hours. On a footage basis the United States of America supplied 63 per cent of the total imports and the United Kingdom 30 per cent. Four television films were rejected outright and an additional 52 were classified as unsuitable for televising. Eliminations were made from 486. Of the nine appeals, five were allowed.

*Foreign language films.* Countries other than Australia, the United Kingdom and the United States of America supplied 332 of the 35 mm foreign language films imported for theatrical exhibition, of which 239 were feature films. Generally, the dialogue is in a foreign language with explanatory English captions. A few have an English commentary and in some cases English dubbed dialogue. Of 6,111 sixteen mm films examined, 932 originated from non-English speaking countries. The chief supplying countries were Germany (298), Japan (218), Italy (139), France (137) and U.S.S.R. (131).

## Museums and art galleries

A museum or art gallery is considered for statistical purposes to be a building, group of buildings or parts of buildings, managed as a unit and intended predominantly for the permanent display of objects of interest (museum) or objects of art (art galleries) to the general public. Institutions displaying live exhibits are excluded (the more important of these are mentioned on pages 683-4), as are buildings used for temporary displays (exhibitions, commercial galleries exhibiting only for sale) without a permanent stock of exhibits; permanent exhibitions which are ancillary to other activities such as exhibits at council chambers, libraries, hotels, and other commercial enterprises providing services to tourists and sightseers; collections which are not readily accessible to the general public, such as university collections for the use of students and research workers; and historic homes, etc., not specifically intended for the permanent display of objects of interest (i.e. where the building itself and its normal fittings are essentially on display).



**Museums and art galleries**

The following table classifies by States and Territories and by ownership the institutions in Australia which have been identified in 1971 as museums and art galleries (branches of museums and art galleries are not shown separately).

**MUSEUMS AND ART GALLERIES: STATES AND A.C.T., AND OWNERSHIP, 1971**  
(Number)

	Major institutions			Other institutions			
	Museums	Art galleries	Mixed institutions	Museums	Art galleries	Mixed institutions	All institutions
State or Territory—							
New South Wales . . . .	3	(a)1	..	4	3	2	13
Victoria . . . . .	3	1	..	5	7	2	18
Queensland . . . . .	1	1	..	1	2	..	5
South Australia . . . . .	1	1	..	7	2	..	11
Western Australia . . . . .	1	1	..	3	1	..	6
Tasmania . . . . .	..	..	2	..	..	..	2
Australian Capital Territory . .	1	..	1	1	..	..	3
Ownership—							
Commonwealth Government . .	1	..	1	1	..	..	3
State Governments . . . . .	8	(a)5	1	3	..	1	18
Municipal authorities . . . . .	1	..	1	6	7	1	16
Private trusts . . . . .	..	..	..	5	6	1	12
Universities . . . . .	..	..	..	1	1	1	3
Private . . . . .	..	..	..	5	1	..	6
<b>Total museums and art galleries . . . . .</b>	<b>10</b>	<b>(a)5</b>	<b>3</b>	<b>21</b>	<b>15</b>	<b>4</b>	<b>58</b>

(a) Closed for alteration from October 1970 to May 1972.

Some descriptive detail in respect of the major institutions is given on pages 547 to 549 of Year Book No. 55.

**Libraries**

The Munn-Pitt Report of 1935 greatly stimulated interest in libraries and librarianship throughout Australia. This is evidenced by the development of libraries, the passing of legislation in all States to increase library services, and the establishment in 1937 of the Australian Institute of Librarians to improve the standard of librarianship. This body was reconstituted in 1949 as the Library Association of Australia and incorporated by Royal Charter in 1963, and its functions now include the promotion and improvement of libraries and library services.

An account of the establishment, growth and functions of the National, Commonwealth, and State libraries is given on pages 533–538 of Year Book No. 55.

**Commonwealth libraries**

*National Library of Australia, Canberra.* The National Library maintains and develops a national collection of library material, representative of all the major countries of the world, and it is also responsible for assembling a comprehensive collection relating to Australia and the Australian people. In fulfilment of the latter statutory function it seeks to preserve books, periodicals, newspapers, government publications, pictures, prints, manuscripts, maps, moving picture films, and sound recordings. It is assisted in this by the deposit provisions of the *Copyright Act* 1968 and has also been enriched by the acquisition of such notable collections as the Petherick collection of 16,500 items in 1911, the Cook manuscripts in 1923, the Cumpston collection on Public Health in Australia in 1936, the Mathews ornithological collection in 1940, the Rex Nan Kivell collection of 16,000 items of Australian and Pacific interest including original paintings, prints, manuscripts, and printed material in 1959, and the Ferguson collection of Australiana, acquired in 1970. The Library maintains a permanent exhibition of paintings, prints, and other historical material selected from its various collections.

In association with the Library of New South Wales, the Library is engaged on a microfilming project to copy original records relating to Australia which are held in Great Britain and other overseas countries.

*Australian National Bibliography*, which appears weekly, monthly, quarterly and annually, lists books published in Australia and books dealing wholly or substantially with Australian subjects or written by Australian authors. It is now computer produced and the records are available in machine-readable form. Catalogue cards for Australian books listed in the bibliography are also made available. The publications of the Australian governments, included in *Australian National Bibliography*,



are also listed quarterly and annually in *Australian Government Publications*. A select list of authoritative Australian books of reference and research value is published annually as *Australian Books*. A similar list of serials is published in successive editions under the title *Current Australian Serials*. The Library's principal activity in subject bibliography is its *Australian Public Affairs Information Service*. A listing of maps and atlases, included in *Australian National Bibliography* from 1961 to 1967, has since that time been recorded in a separate quarterly publication entitled *Australian Maps*.

Co-operative bibliographical activity includes recording, in a series of union catalogues, the holdings of the major Australian libraries. The national union catalogue of monographs, maintained in card form, was commenced in 1960 and since then all the larger and an increasing number of the smaller libraries have reported their monograph accessions to the National Library. The major published union catalogue is the loose leaf, continually revised *Serials in Australian Libraries, Social Sciences and Humanities*, which complements another catalogue, *Scientific Serials in Australian Libraries* published by the Commonwealth Scientific and Industrial Research Organization.

Under an agreement with the United States National Library of Medicine, the Library has, since 1969, operated a regional Medical Literature Analysis and Retrieval (MEDLARS) Centre. The Australian MEDLARS Service contributes indexed entries to this system and on request provides computer-produced bibliographies of recent and current material to workers in the various biomedical fields.

The National Library acts as a central library of documentary and educational films, its film collection containing approximately 9,000 titles, together with Australian historical films. It published *Australian Films: a Catalogue of Scientific, Educational and Cultural Films, 1940-58* in 1959 and annual supplements in succeeding years.

The National Library's collections contain over 1,250,000 volumes, 25,000 paintings, pictures and prints, 100,000 photographs, 54,000 reels of microfilm, 3,800 running feet of manuscripts, 60,000 motion picture stills, 18,000 reels of moving picture films, 230,000 maps, and 500,000 aerial photographs.

*Patent Office Library.* The Library of the Commonwealth Patent Office, Canberra, contains approximately 15,600 books and a wide variety of periodicals and other literature relating to pure and applied science, industrial technology and the industrial property (patent, trade mark, design and copyright) laws and practice of most countries. Patent specifications of inventions are received from the principal countries of the world; present holdings are over 12,000,000. Indexes include a microfilm of a classified index to 3,000,000 U.S.A. patents and translations of abstracts of U.S.S.R. patents.

*Commonwealth Scientific and Industrial Research Organization.* The library holdings of the Organization cover the pure and applied sciences. In addition to the Central Library and Information Services located in East Melbourne, each of the Divisions has specialised collections covering such subjects as food research, building research, soil research, chemistry, physics, animal health, and fisheries. The Central Library maintains a union catalogue of the holdings of all CSIRO libraries.

*The Australian War Memorial Library.* In the War Memorial library are housed the documentary and pictorial records of Australia's fighting services in wars in which they have participated. The printed records section contains over 70,000 volumes, a large collection of military maps, newscuttings and newspapers, sound recordings, war posters, and postage stamps. The collection of official war photographs covering the 1914-18, 1939-45 and Korean Wars numbers over 250,000, and a collection of official motion picture film depicts Australia at war. Adequate facilities exist for public research and requests for information are met where practicable.

*The Commonwealth Parliamentary Library.* The library is organised to provide a specialised service to the Commonwealth Parliament. The two main sections are the Legislative Research Service and the Legislative Reference Service. The Research Service comprises six groups—(i) Defence, Science and Technology; (ii) Education and Welfare; (iii) Finance, Industries, Trade and Development; (iv) Foreign Affairs; (v) Law and Government; (vi) Statistics. The groups are staffed by specialists who prepare analyses and interpretations of specific issues with which the Parliament is or may be concerned. These are usually in written form but may consist of consultations with individual Members of Parliament or the Committees of Parliament. The Research Service also provides specialised information for Members. The Reference Service answers questions and provides information on any subject, mainly from books, government documents, Hansard reports, periodical articles, and newspapers. The Library collection is concentrated on topical material, supported by a wide collection of standard references; it totals 25,000 titles, including 8,000 serial titles. The Library publishes the *Parliamentary Handbook* which is a standard reference work, a series of periodical abstracting bulletins, occasional annotated reading lists and a fortnightly accessions list.

*Other Commonwealth Government Libraries.* Most Commonwealth authorities have specialised collections in their own fields and in addition draw largely on the National Library.

*Library services in the Territories.* The Northern Territory Library Service maintains five centres in the Territory. At 30 June 1971, stocks totalled 71,949 volumes which were held at the following centres: Darwin, 32,605; Nightcliff, 9,576; Alice Springs, 17,606; Tennant Creek, 6,398; Katherine, 5,764. The National Library, through its Extension Services Section, conducts the Canberra Public Library Service to residents of the Australian Capital Territory, to whom 1,188,430 loans were made in 1970-71. At 30 June 1971, 338,006 volumes were held, 201,293 at adult libraries, and 136,713 at children's libraries.

### State libraries

*New South Wales.* At 30 June 1971, 186 councils had established libraries in terms of the Library Act, 1939-1970. During 1970-71 they spent on their libraries \$6,950,431 including \$1,856,132 received in subsidy. There are 268 libraries, of which 93 are in the metropolitan area and 175 in the country. There are also 25 bookmobiles, of which one is in Sydney, 10 in the suburbs of Sydney, and 14 in country municipalities and shires. These libraries contain 4,651,701 volumes. The State Library provides a central cataloguing service for municipal and shire libraries constituted under the Act.

Under the Library of New South Wales Act, 1969, the former Public Library of New South Wales became the Library of New South Wales. It includes a General Reference Department of 630,239 volumes, an Extension Service, together with the Shakespeare Tercentenary Memorial Library, and the Mitchell and Dixson Libraries and Galleries which are mainly devoted to Australian and Pacific material. The Extension Service lends books to municipal and shire libraries and to individual borrowers. The total stock of the Service is 80,282 volumes, and 29,547 books were lent to public libraries and individual borrowers during 1970-71. In 1971 there were 266,447 volumes in the Mitchell Library, in addition to manuscripts, maps and other material. The total number of volumes in the Library of New South Wales now exceeds 1,017,104 apart from manuscripts, historical pictures, and other material. The Library maintains an adult education section servicing adult education activities for the Universities of Sydney and New England and the Workers' Educational Association.

Other important libraries in New South Wales are: Teachers Colleges, 373,312 volumes; the City of Sydney Public Library, 234,336; Department of Technical Education, 335,975; Railway Institute, 170,385; Parliamentary Library, 142,500; Australian Museum, 40,000; Government Transport Institute, 25,269; New South Wales Teachers' Federation Library, 26,000; Workers' Educational Association, 15,740; and the Library at the National Herbarium, over 12,000 volumes.

*Victoria.* During 1971-72, 173 councils shared Government library grants amounting to \$1,734,100. Of this amount, \$1,606,100 was direct municipal library subsidy. With the addition of expenditure from these councils' own funds the total expenditure on municipal library services for 1971-72 was nearly \$5,321,000. In 1970-71, 1,017,000 borrowers used the free library services now totalling 3,234,716 books, to the extent of 17,086,000 issues.

Particularly in the country, services have been developed by means of regional libraries. These services, of which there are 27 at present, comprising a total of 127 councils, consist of groups of councils which pool their resources, book-stocks and trained staff. The Victorian Government provides an Establishment and Regional Library Development Grant of \$100,000 per annum.

There are 16 bookmobile services operating in Victoria, 12 in country regions and 4 in the metropolitan area.

The collections of the State Library of Victoria total about 1,095,000 items. Of these the La Trobe collection consists of 54,000 volumes as well as many pictures, manuscripts and old newspapers. The State Library receives 7,500 periodicals, annuals and newspapers. The Library also administers the State Archives, which comprise 55,000 shelf feet of records.

*Queensland.* The holdings of the Public Library of Queensland and its extension services in 1970-71 were: main reference collection, 235,701 volumes and 14,140 maps and pamphlets; Country Extension Service, 92,971; Oxley Memorial Library, 29,058 volumes and 50,350 maps, pamphlets and miscellaneous items.

Local authorities are empowered by the Libraries Act to establish and conduct library services as a function of local government. In 1970-71, 86 local authorities were conducting 152 library services. The Brisbane City Council has established 22 of these libraries, also a mobile library to serve eight outlying suburban areas, and a bookmobile which takes books to incapacitated people. There were 133 libraries in Queensland free to adults. To help overcome the problems of a large area and sparse population, various local authorities have established 4 regional library services with headquarters at Charleville, Barcaldine, Mount Isa and Emerald, respectively. During 1970-71 the State Government provided a grant of \$946,241 from consolidated revenue to finance the activities of the State Library, to pay subsidies to local bodies conducting free library services, and for the acquisition or improvement of library buildings and equipment and to pay lesser subsidies on books, equipment and maintenance to local bodies conducting subscription libraries.

At 30 June 1971 the Parliamentary Library of Queensland held about 100,000 volumes and pamphlets.

*South Australia.* The Reference Department of the State Library of South Australia contains 281,955 volumes and receives over 3,000 periodical titles. There are 58,781 volumes in the Adelaide Lending Service. The Country Lending Service has 520,245 volumes. The Adelaide Lending Service lent 330,077 books in 1970-71, and the Country Lending Service, 156,339.

The library of the Parliament of South Australia held approximately 60,000 volumes in 1971.

There are 31 local public libraries in South Australia provided by 22 local government and other authorities. The libraries are subsidised on a \$1 for \$1 basis by the State Government. The Libraries Board of South Australia, through the State Library of South Australia, provides various central services. Book-stocks are pooled in the State Library of South Australia and are interchanged between the libraries.

At the end of June 1971 these local public libraries contained 274,735 books. There were 145,166 registered borrowers. During 1970-71, 2,083,872 books were lent.

*Western Australia.* The Library Board of Western Australia administers the State Reference Library and the Central Music Library, and provides all books and related services to 133 local public libraries throughout the State. Its stocks at 30 June 1971 were 1,068,289 volumes, comprising circulation stock (including books in public libraries), 754,681 volumes, State Reference Library, 295,983 bound volumes and Central Music Library, 4,386 books on music and 13,239 scores.

*Tasmania.* The Tasmanian Library Board administers the State Library in Hobart, the extension of library services throughout the State and State aid to libraries. State Government expenditure on library services in 1970-71 was \$821,200. A regional library system commenced in April 1965 in 5 north-western municipalities, with headquarters in Burnie, and smaller libraries in other large towns and a bookmobile in rural areas. A second regional library system, with headquarters in Launceston, was opened on 1 July 1971. Fourteen southern municipalities are served by 2 bookmobiles based in Hobart and a bookmobile serves schools in the Hobart metropolitan area. At 30 June 1971 the State Library in Hobart held 140,384 reference volumes and 112,624 lending volumes. The Board provided to municipal libraries by way of subsidy 318,710 books out of a total book-stock of 381,256 available for this purpose.

The State Library continued to provide a library of documentary films (4,539) and recorded music (14,350 discs) available for loan throughout the State.

### University libraries

A description of libraries in Australian universities appears on pages 539-41 of Year Book No. 55. The following table shows the number of books and pamphlets held, accessions during the year, and expenditure on libraries for each university. For further information, see annual mimeograph publication *University Statistics—Part 2: Staff and Libraries* (No. 13.8).

UNIVERSITY LIBRARIES

University	Books and pamphlets (a)	Accessions during year (b)	Expenditure (c)
	'000	'000	\$'000
Sydney . . . . .	1,358	61	1,640
New South Wales . . . . .	609	49	1,125
New England . . . . .	292	18	385
Newcastle . . . . .	176	18	375
Macquarie . . . . .	281	39	580
Melbourne . . . . .	593	29	1,176
Monash . . . . .	434	50	1,341
La Trobe . . . . .	130	20	589
Queensland . . . . .	662	46	1,119
James Cook . . . . .	52	9	226
Adelaide . . . . .	594	31	782
Flinders . . . . .	178	26	446
Western Australia . . . . .	409	25	663
Tasmania . . . . .	229	19	397
Australian National . . . . .	555	51	1,113
Total . . . . .	6,553	492	11,957

(a) 30 April 1971.  
31 December 1970.

(b) Year ended 30 April 1971.

(c) During year ended



### Children's libraries and school libraries

For details of Commonwealth grants for the development of secondary school library services, see pages 662-3 of this chapter.

*New South Wales.* Children's libraries are being developed as departments of municipal and shire libraries. The Education Department maintains a school library service for the fostering of State school libraries, which are maintained partly by parents and citizens associations and partly by departmental subsidy. Secondary and central schools, and an increasing number of primary schools, have teacher librarians.

*Victoria.* The Education Department provides for the building of libraries in secondary and technical schools, and new primary schools with 10 or more classrooms. A subsidy of up to \$9,000 is available to other primary schools for library buildings. Library furniture is provided, establishment grants are given to new schools for the purchase of books, and the Government provides an annual per capita grant to all schools. At June 1971, 466 primary, 252 secondary, and 89 technical schools had central libraries.

*Queensland.* In Queensland, 148 libraries are free to children. The Brisbane City Council conducts 22 of these, also a mobile library to serve eight outlying suburbs. Country children may borrow from the Country Extension Service which has a separate children's collection. The purchase of books for State school libraries in Queensland is financed by school committees and parents associations, with a \$1 for \$1 subsidy from the Department of Education.

*South Australia.* A children's library of 45,742 volumes is used by school classes and individual children living in the metropolitan area. In 1970-71, 187,563 books were lent. A lending service for young people from thirteen to eighteen years of age has a stock of 17,006 volumes, and in 1970-71, 88,745 loans were recorded.

*Western Australia.* The Education Department provides library services, issues materials and gives library allocations for library resources purchased by schools. All government high schools are provided with library accommodation and furniture and their libraries are staffed by school librarians according to the size of the school. New high schools are issued with books to a value of \$1,500 in each of their first three years and all high schools receive an annual issue of books and an allocation for book purchases. New primary schools are issued with books to the value of \$200 or \$400 in their first year according to their student enrolments. All government and non-government schools with post-junior students receive an annual issue of books for matriculation studies. A number of primary schools have organised school libraries in rooms available, or in premises provided by the parents and citizens associations. Some new primary schools are being provided with a resource centre (i.e. a library and an audio-visual aids centre) as part of their construction. Annual issues of books are made to all primary schools, varying according to the size of the school, and assistance is provided for the purchase of library books. The Charles Hadley Travelling Library provides 700 boxes of books which are circulated to all small schools, mission schools, and special classes. Children who are unable to attend school are provided with books from the Correspondence School's library.

*Tasmania.* All the State's municipal libraries have Lady Clark Memorial Children's Libraries. The Lady Clark Memorial Children's Library in the State Library in Hobart has 26,513 books and serves schools in the Hobart metropolitan area by bookmobile. More than 150 schools which are not close to a municipal library have collections of books on loan from the Lady Clark Memorial Children's Section of the Division of External Services of the State Library, which has a stock of 169,074 books. Libraries have been built up in most schools, with Education Department subsidies matching local funds to levels determined by the size of the school. A new Central Library Service Branch offers bibliographic and technical advice on school library development.

## Book publishing

Statistics of book publishing in Australia and the External Territories are prepared from data supplied by the National Library of Australia, which receives copies of all books and pamphlets published in Australia and the External Territories, although not necessarily in the year of publication.

The method of counting conforms with international practice. Each title is counted as one unit. The statistics cover all non-periodical publications published in Australia. They refer to publications of five pages or more and include pamphlets, new translations, and re-editions. They include government publications, educational textbooks, published university theses, etc., but exclude publications not available to the general public, advertising material, publications of transitory interest, musical works, and maps and charts.



### Number of publications received

The following table shows the number of publications received by the National Library in 1971 by subject classification and publisher. Trade publishers are those organisations set up predominantly for publishing, whose title output is significant and widely available throughout the bookselling trade; marginal publishers, commercial art firms for whom publishing is subsidiary to their main function. Comparative figures are given for receipts from 1967 to 1970.

AUSTRALIAN PUBLICATIONS RECEIVED BY THE NATIONAL  
LIBRARY IN 1971: SUBJECT GROUP AND PUBLISHER

	<i>Books</i>	<i>Pamphlets</i>	<i>Total</i>
<b>Subject group—</b>			
Bibliography, libraries, general . . . . .	39	54	93
Philosophy, psychology . . . . .	25	9	34
Religion, theology . . . . .	102	78	180
Social sciences . . . . .	629	1,349	1,978
Linguistics, philology . . . . .	62	12	74
Science . . . . .	234	138	372
Technology, business . . . . .	365	390	755
Art, amusement . . . . .	146	136	282
<b>Literature—</b>			
History of literature, literary criticism . . . . .	3	..	3
Anthologies, school editions . . . . .	24	2	26
Australian literature . . . . .	184	80	264
Other literature . . . . .	39	24	63
Geography, travel . . . . .	109	94	203
History, biography . . . . .	125	71	196
<b>All publications . . . . .</b>	<b>2,086</b>	<b>2,437</b>	<b>(a)4,523</b>
<b>Publisher—</b>			
Government . . . . .	428	1,566	1,994
Trade . . . . .	1,216	336	1,552
<b>Marginal—</b>			
Commercial(b) . . . . .	71	49	120
Societies and institutions . . . . .	315	448	763
Private individuals . . . . .	56	38	94
<b>Total . . . . .</b>	<b>2,086</b>	<b>2,437</b>	<b>4,523</b>
<b>Annual receipts—</b>			
1970 . . . . .	2,215	2,654	4,869
1969 . . . . .	1,890	1,986	3,876
1968 . . . . .	1,711	1,689	3,400
1967 . . . . .	1,601	1,769	3,370

(a) Includes 34 publications in languages other than English and 15 publications translated from the original language. (b) Firms for whom publishing is subsidiary to their main function.

## Archives

General interest in archives in Australia was aroused in 1888, when the Colony of New South Wales celebrated its centenary, the occasion being marked by official publication in 1889-1894 of the *History of New South Wales from the Records* by G. B. Barton and A. Britton, and in 1893-1898 of the series of *Historical Records of New South Wales*, edited by A. Britton and F. M. Bladen. Both publications were based on transcripts of documents in London which had been made by Mr James Bonwick, appointed Archivist by the Government of New South Wales in 1884.

In 1902 Mr F. M. Bladen presented to the Commonwealth Government a report on *European Archives*, in which he recommended the establishment of a Commonwealth Archives Office and the copying of further official records in London. The copying project continued and some of its results were embodied in the volumes of *Historical Records of Australia*, published by the Commonwealth in 1914-1925, under the editorship of Dr J. F. Watson.

Measures for the preservation and storage of original documents were not taken until later years. In the absence of duly constituted archives offices, the various major libraries throughout Australia

undertook the collection of historical records, both from official and private sources. An archives department of the Public Library of South Australia was established in 1920, and other institutions formed archives branches in, 1944 (Commonwealth National Library), 1945 (Public Library of Western Australia), 1948 (State Library of Victoria), 1949 (State Library of Tasmania), 1953 (Public Library of New South Wales), and 1959 (State Library of Queensland). Legislation to govern arrangements for official records was passed as follows: South Australia (1925, 1936), Tasmania (1943, 1965), Queensland (1943) and New South Wales (1960). Since 1961, separate authorities for official archives have been established: Commonwealth Archives Office, 1961; Archives Office of New South Wales, 1961; Archives Office of Tasmania, 1965. A Business Archives Council was established in 1954 to co-ordinate activities in the field of company records and a number of firms have established their own archives services. Certain churches have also provided appropriate facilities for ecclesiastical records. Other corporate and private archives continue to be collected by several archives offices, libraries and more recently, universities.

#### **Commonwealth Archives Office**

An account of the development of the Commonwealth Archives Office and a detailed description of its functions appear on pages 543-4 of Year Book No. 55. The Archives Office functions as a central agency for the control of records created by the Commonwealth Government which are no longer required in the day-to-day business of government. At 30 June 1971 the total holdings of the Archives Office throughout Australia amounted to 497,000 shelf feet of records, including 198,000 feet of permanent material, such as files, manuscripts, registers, cards, books, maps, plans, models, paintings, films, photographs, microfilms, recordings and tapes. The Office regulates access to all Commonwealth records, whether in its custody or held by departments, in accordance with the Government's access rules. These provide that, with certain exceptions, Commonwealth records which are 30 years old or more are available on open access to all accredited members of the public. In January 1972 the Government decided that the thirty year access rule should apply to Cabinet papers also; and that because of their special interest, the remainder of the Cabinet papers up to the end of 1945 should be released for public examination. It further decided that departmental papers for this period should become available at the same time as Cabinet papers. The Archives Office provides an advisory service to inquirers, both official and public, on appropriate sources of information for particular topics including material held by the Office itself, by other Commonwealth agencies and elsewhere. During 1970-71 some 290,000 items were lent to departments. The Office carries out searches for departments and provides information from the records in its custody. Some 8,100 requests for these services were received in 1970-71. In accordance with the Commonwealth Government's access rules, the Office also supplies information to members of the public engaged in academic or other forms of research. Records may be consulted by holders of a search ticket and 212 public search tickets are currently valid. During 1970-71 inquiries were received from 418 researchers. There were 8,000 daily visits to archives search rooms and repositories by officials and the public, and 53,000 items were produced for consultation.

The headquarters of the Commonwealth Archives Office is in Canberra, and there are branches in Sydney, Melbourne, Brisbane, Adelaide and Perth. In 1971 records surveys were conducted in the Northern Territory, Papua New Guinea and Norfolk Island. The Office maintains liaison with similar organisations in overseas countries and is a national member of the International Council on Archives, established under the auspices of UNESCO.

#### **Archives Office of New South Wales**

The Archives Authority of New South Wales is a statutory corporation established under the Archives Act 1960 and has custody and control of the State archives. These are preserved in the Archives Office of New South Wales.

The Act requires that before any public records of the State are destroyed or disposed of, notice must be given to the Archives Authority which may then require any such records to be made available to it. Records transferred to the Authority become State archives and when 35 years old are generally open to holders of a reader's ticket.

The State archives at 31 December 1971 occupied 33,535 feet of shelving. This excludes more than 16,000 maps and plans besides other records which cannot be readily measured. In addition there were about 100,000 feet of permanently valuable records housed mainly in the Government Records Repository.

#### **Archives Office of Tasmania**

The Archives Office of Tasmania operates under the *Archives Act* 1965, No. 47. The statutory authority under the Act is the Tasmanian Library Board. No records of State and local authorities may be destroyed or otherwise disposed of except on the written authority of the Principal Archivist. The holdings of the Archives Office amount to over 12,000 shelf feet (including non-public records).

Three parts of a 'Guide to the Public Records of Tasmania' have been published and five further record groups are being inventoried for publication. A file lending service is conducted for the benefit of departments and authorities which have deposited semi-current records in the Archives Office. Research workers have access to records in the search room and a mail reference service is provided for country and interstate inquirers. A panel of private researchers is available who hire their services to inquirers who wish to undertake prolonged search of documents.

#### **Australian National University Archives**

The Australian National University Archives was established in 1954 when the records of the Australian Agricultural Company were acquired, and in 1959 its collecting activities were expanded to include records of employee organisations. The University now holds a collection of the records of businesses (approximately 132 accessions) and of trade unions (approximately 186 accessions). The aim is to gather primary source material to support advanced research within the University in economic history, history, and political science. Detailed arrangement and description are undertaken and close liaison is maintained with scholars in the Research School of Social Sciences to keep the collecting policy abreast of trends in research. Scholars from other universities are also helped, and reference work is carried out to answer inquiries. The University Archives include deposits which have been microfilmed and pamphlet collections of interest to research workers in political history.

#### **Business Archives Council of Australia**

The Business Archives Council of Australia works for the preservation of business records and promotes the writing of business history. The Council itself does not collect business records. The main collecting centres are the Archives of the Australian National University, the University of New England and University of Melbourne. The University of New England concentrates on rural industries. The Australian National University and the University of Melbourne have large collections on a wide range of business activity, and are notable for records of trade unions and mining companies respectively.

### **Botanical and zoological gardens**

In addition to the zoological gardens referred to in the following paragraphs there are numerous privately owned zoos and sanctuaries, many of them at tourist resorts, which maintain collections of Australian flora and fauna. There are also various national parks, forests, reserves, etc., dedicated for public use, which are preserved largely in their natural condition.

#### **New South Wales**

The Sydney Botanic Gardens are situated on the shores of Farm Cove, Sydney Harbour. They occupy sixty-six acres and contain a large collection of flowering plants, shrubs and trees as well as hothouses of orchids and ferns.

The Zoological Gardens at Taronga Park, on the northern side of Sydney Harbour, occupy about seventy acres and contain an aquarium. In 1970-71 admissions to the grounds were 869,652. The receipts of the zoological department of the Taronga Park Trust amounted to \$789,991 in 1970-71 and expenditure was \$657,576. Exhibits at 30 June 1971 comprised 926 mammals, 2,644 birds, 328 reptiles, 73 amphibians and 1,418 fish.

#### **Victoria**

The main botanical gardens in the State are the Royal Botanic Gardens, an area of eighty-eight acres within one mile of the centre of the City of Melbourne, containing over 12,000 species of plants, of which there are some 30,000 individual specimens. Many species of native birds breed on islands in lakes within the gardens. In October 1970, an extension was made to the Royal Botanic Gardens by the purchase of 395 acres at Cranbourne on Mornington Peninsula for purposes of a Botanic Gardens and Research Institute devoted to the growing, display and study of Australian native plants.

The Zoological Gardens in Royal Park contain a wide selection of animals, birds and reptiles. A wild life sanctuary is also maintained at Healsville.

#### **Queensland**

Botanical gardens have been established in Brisbane and in several other cities. The Brisbane Botanic Gardens occupy approximately forty-six acres on the banks of the Brisbane River in the central city area and are noted for their collections of palms, tropical trees and shrubs, and succulents; they contain over 7,500 species.



Initial development has started on a new botanic gardens in the foothills of Mount Coot-tha, about three miles from central Brisbane. The area being developed is approximately 200 acres.

#### **South Australia**

The Adelaide Botanic Gardens covers 45 acres and contains collections of Australian and exotic plants from low rainfall and sub-tropical regions. In glasshouses are collections of tropical, ornamental and economic plants. Special collections include cacti and succulents, bromeliads, and begonias. An up-to-date and comprehensive botanical and horticultural library is maintained.

Mount Lofty Botanic Garden, of approximately 180 acres, was established in 1960 and is expected to be opened to the public by the mid-1970s.

The State Herbarium was established in 1952 and moved to the present building in 1965. It contains about 250,000 specimens.

The Zoological Gardens, opened in 1883, have an area of approximately 19 acres, and contain a fine collection of animals, reptiles, and birds.

#### **Western Australia**

A botanical garden and arboretum for the native plants of Western Australia is in King's Park, a reserve of almost 1,000 acres close to the centre of Perth. The indigenous flora of the State is represented in the Western Australian collection by approximately 1,200 species which have been successfully brought to maturity. Trees native to the southern half of the State are grown as specimens in the arboretum.

Regular field work is undertaken to collect material and carry out botanical exploration. Seed of native plants collected is distributed from surplus stocks to botanical institutions throughout the world and sold to private growers and nurserymen. An annual seed list offers from 1,000 to 1,300 species. About 15,000 packets of seed are distributed each year.

Experimental work in propagation of native plants is carried out and information acquired is passed on to growers through State branches of the Society for Growing Australian Plants and its journal. Facilities are provided for the employment and ancillary training of students enrolled in the three-year course of the Western Australian Certificate of Horticulture and Park Administration.

The Zoological Gardens at South Perth have an area of 44 acres and are under the control of the Zoological Gardens Board. Animals, birds and reptiles are exhibited. During the year 1970-71, 423,520 people paid for admission into the zoo and in addition, 4,014 disadvantaged children and adults were admitted free.

#### **Tasmania**

The Royal Tasmanian Botanical Gardens adjoining Government House on the Queen's Domain contain a fine collection of exotic trees and shrubs and a small aviary.

There are three, main, privately owned, wildlife sanctuaries and zoos, each with a few exotic animals, at Granton near Hobart, at Punch Bowl near Launceston and at Westbury, 20 miles from Launceston. The Launceston City Council keeps a small collection of animals and birds at City Park.

#### **Northern Territory**

The Darwin Botanical Gardens occupy seventy-four acres and feature thirty acres of tropical plants of both native and overseas origin. Four acres are used for an amphitheatre and contain a number of native and exotic plants. The Gardens are controlled by the Corporation of the City of Darwin.

#### **Australian Capital Territory**

The Canberra Botanic Gardens on the lower slopes of Black Mountain have been under development since 1950. The gardens are on a 100-acre site and are being developed for the study of the botany, propagation, and cultivation of Australian native plants. The Gardens were opened for public inspection in 1967 and were officially opened in 1970.

The Tidbinbilla Nature Reserve covers 12,500 acres of the Upper Tidbinbilla Valley, about 25 miles from Canberra. Approval for its establishment was given in 1962 and it was declared a Nature Reserve under the Public Parks Ordinance on 27 October 1971. This Reserve has proved a great attraction for visitors with the attendance figure rising from 42,700 in 1967 to approximately 114,000 in 1971. The Jervis Bay Nature Reserve in the Commonwealth Territory of Jervis Bay consists of 10,670 acres of coastal area. Although the area has been managed as a reserve over a number of years, the Reserve was declared on 7 October 1971. Both Tidbinbilla and Jervis Bay Nature Reserves are designed to conserve the indigenous plant and animal communities and to enable the public to see the fauna in their natural habitat.



## SCIENTIFIC AND INDUSTRIAL RESEARCH IN AUSTRALIA

### Background

Scientific research in Australia increased considerably with the outbreak of the 1939–45 War and research activities continued to expand in the period of rapid post-war economic growth. Prior to 1939 Australia's research effort had been oriented towards the biological sciences, but under the stimulus of military requirements, this effort spread to the physical sciences and to problems of industrial technology. Research in the medical and social sciences also increased. With the overall research expansion a growing number of government agencies, both Commonwealth and State, university departments and industrial organisations established scientific programmes related to their various areas of interest and responsibility.

Much of the present day research effort is directed towards the development of natural resources and of primary and secondary industries. For information about research in the rural industry and the mineral industry, see Chapters 22 and 26 respectively. There is also considerable scientific research effort in the areas of medicine, space, the environment, social sciences, and atomic energy.

### Commonwealth Government

The Commonwealth Government has played a key role in the war time and post-war development of the national scientific effort through programmes of research and related scientific activities in its own establishments and in funding scientific activities generally.

Over thirty Commonwealth Government agencies are engaged in research and scientific activities having a wide range of interest including development of natural resources and of primary and secondary industries; health; communications and transport; atomic energy; defence. Details of these activities are contained in annual reports of the individual agencies. A brief description of the research activities of the Department of Supply is given in Chapter 4, Defence.

Through its own agencies the Commonwealth Government engages in extensive research in the area of defence science (for details see page 96). Research programmes are undertaken to meet Australia's defence needs and to fulfil agreed commitments under international arrangements. Australia has co-operated with allied nations in scientific projects of defence significance, particularly where such projects add to technological development in Australia.

### Commonwealth Scientific and Industrial Research Organization

The Commonwealth Scientific and Industrial Research Organization (CSIRO) is Australia's largest civil scientific body and now has a staff of about 6,400 including some 2,000 professional scientists. Its main function is to carry out scientific research for the primary and secondary industries of the Commonwealth and its Territories. It does not conduct defence research, medical research or atomic energy research. The other powers and functions of CSIRO as defined in the *Science and Industry Research Act 1949*, include:

- training of scientific research workers and the awarding of scientific research studentships and fellowships;
- making of grants in aid of pure scientific research;
- recognition or establishment of associations of persons engaged in any industry, for the purposes of carrying out industrial scientific research and the co-operation with, and the making of grants to, such organisations;
- testing and standardisation of scientific apparatus and instruments and the carrying out of scientific investigation connected with standardisation;
- collection and dissemination of information relating to scientific and technical matters; and
- publication of scientific and technical reports, periodicals and papers.

CSIRO is a statutory corporation operating under its own Act of Parliament and exercising its powers subject to the regulations and the approval of the Minister for Education and Science.

The governing body of the Organization is the Executive, which is located in Canberra and consists of nine members appointed by the Governor-General. There are five full-time members, one of whom is chairman, and four part-time members. At least five of the members must possess scientific qualifications. The Executive is responsible to the Minister for the policy and the work of the Organization.

CSIRO has thirty-four Divisions, each working in some particular area of research such as animal health, tropical pastures or textile physics. Since the Organization's activities are Commonwealth-wide and often involve extensive field work, a number of branch laboratories and field stations have been established in various parts of Australia. The Head Office is in Canberra and Regional Administrative Offices are located at Brisbane, Canberra, Melbourne, and Sydney. The Organization also has an Australian Scientific Liaison Officer in London and Scientific Counsellors in Washington and Tokyo.

The Organization's total budget for 1971-72 was about \$71,000,000. Nearly four-fifths of this was provided directly by the Commonwealth Government, the remainder being contributed by primary industry, individual companies, Australian and overseas government instrumentalities and private foundations.

#### **Australian Institute of Marine Science**

The Australian Institute of Marine Science, to be established at Townsville, Queensland, over the next five years is one of the most recent ventures in scientific research by the Commonwealth Government. It has been proposed that this new Institute give particular attention to the ecology of the Great Barrier Reef and of associated biological systems, and that it undertake oceanographic research in the Coral Sea and northern Australian waters.

#### **Nuclear Energy**

The Australian Atomic Energy Commission is a statutory corporation which functions under the direction of the Minister for National Development. It consists of five members. The Commission is responsible for undertaking and encouraging the search for and mining of uranium and is empowered to co-operate with the appropriate authorities of the States in connection with these and related matters. It is authorised to develop the practical uses of atomic energy by constructing and operating plant for this purpose, carrying out research, and generally fostering the advancement of atomic energy technology. A detailed description of its activities is contained on pages 560-562 of Year Book No. 55.

The Australian Institute of Nuclear Science and Engineering comprises the Australian Atomic Energy Commission and Australian universities. The Institute's operations are financed by membership subscriptions and a Commonwealth Government grant which amounted to \$331,000 in 1970-71. The purpose of the Institute is to stimulate research and training in nuclear science and engineering within the universities and to arrange access for university research workers to the highly specialised equipment at the A.A.E.C. Research Establishment.

The Australian School of Nuclear Technology is jointly sponsored by the Commission and the University of New South Wales. Courses are being offered in nuclear technology, production and use of radioisotopes, radiological safety, health physics, and other related topics.

#### **Nuclear Power**

In October 1969 the Commonwealth Government announced a proposal to build a nuclear power station of 500 megawatt capacity at Jervis Bay, on the New South Wales south coast, by 1975, subject to a satisfactory tender. This followed discussions early in 1969 between the Commonwealth and all State Governments. However, in June 1971 the Government decided to defer the decision indefinitely.

#### **Nuclear Fuel**

Important discoveries of uranium have recently been made in the Northern Territory. Although their full extent has not yet been determined, early estimates suggest that Australia will become a major producer of uranium. This has led to some preliminary investigations into the possibility of establishing a nuclear fuel industry with considerable export potential.

### **State governments**

Scientific programmes of the six State governments are directed mainly towards agriculture, fisheries, forestry, public health, water supply and power generation, engineering and construction, and areas of the social sciences. These research programmes are generally of an applied nature and are related directly to the various responsibilities of the departments and instrumentality concerned. State government research programmes extend to such fields as physical and mental health, child welfare, vocational guidance, etc., and represent an important contribution to Australia's overall research effort.

### **Universities**

The fifteen universities in Australia are engaged in an extensive and diverse range of research programmes in the physical and earth sciences, medicine, agriculture and biological sciences, and social sciences. University research is mostly of a fundamental character although some university departments are also concerned with applied research directed to the solution of practical problems. The Council of the University of New South Wales in 1959 established a non-profit research and development company, Unisearch Ltd., which provides technical advice and service for both large and small industrial organisations.

The post-war growth of university research has been accompanied by rapid development of post-graduate studies which, prior to the late 1950s, were undertaken mainly overseas. In 1971, 6,816 students were enrolled at Australian universities for higher degrees in science-oriented subjects.

Details of the courses offered in Australian universities together with background information on their teaching and research programmes, and a comprehensive summary of general university development in recent years are given in Year Book Number 55, 1969 pages 507-9. The reader should also refer to the handbooks and calendars published by each university.

## Industry

An increasing amount of research and development is being undertaken by Australian industries. Firms with major research programmes are mainly in the chemical, pharmaceutical, electronic, sugar, paper, mining and steel industries. Several industries have established research institutes or associations.

### Productivity promotion

Two complementary organisations—the Productivity Group Movement and the Productivity Promotion Council of Australia are concerned with distinct areas of productivity promotion. Executive and administrative services for them are provided by the Department of Labour and National Service.

*Productivity Group Movement.* The role of productivity groups is to improve the productivity performance of individual member undertakings. Groups were first formed in New South Wales and Victoria in 1957 and were later established in all States. At 29 February 1972, there were 229 groups comprising 4,853 member undertakings throughout the nation.

A group consists of about twenty members whose representatives meet regularly to engage in the exchange of practical ideas and experiences and seek improvement in the effectiveness of members' operations. There are three main types of productivity groups: mixed industry groups which bring together knowledge and experience from a wide variety of fields; single industry groups whose members are in the one industry (for example, printing, transport, timber); and professional type groups comprising people such as production engineers and personnel managers.

In each State there is a Productivity Groups Advisory Council which is a forum for the exchange of ideas among the groups and seeks to serve their common interests. At the national level there is a Productivity Groups National Committee on which each State Council is represented. This Committee publishes *Quest*, a quarterly news magazine for groups, arranges productivity group publications and films, and develops national themes and group expansion programmes.

*Productivity Promotion Council of Australia.* The complementary body is the Productivity Promotion Council of Australia which was inaugurated in September 1969. It is concerned with community education in productivity, stimulation of senior management's interest in productivity promotion, and collaboration with other professional bodies in arranging joint activities on factors affecting productivity. It is also committed to help the expansion of the productivity group movement.

Membership of the Council is drawn from organisations business concerns, government and semi-government bodies and individuals. Finance is provided by members' subscriptions on a sliding scale based on type and size of undertakings.

The Council operates through a National Committee, State Branch Committees and Standing Advisory Panels. The National Committee is composed of nominees from major national employer and employee associations, Commonwealth government departments and a number of individual experts. Branch committees have been established in New South Wales, Victoria, Queensland and South Australia.

## Other research (including joint projects)

### Antarctic research

Australia has participated in scientific research in the Antarctic region since 1911. The Antarctic Division of the Department of Supply maintains permanent bases at Mawson, Davis and Casey on the Antarctic continent and one on Macquarie Island. Scientists from Government agencies and universities are engaged in continuing research programmes relating to many aspects of the Antarctic environment.



### Space projects

Australian participation in scientific projects making use of artificial earth satellites began with facilities established as a contribution to the programme of the International Geophysical Year (1957–58).

Deep space tracking stations constructed and operated at a number of sites in Australia through joint arrangements with the United States of America have played an important role in the American manned space flight programmes. For details, see page 96.

### Astronomy

One of Australia's significant contributions to scientific endeavour at the international level has been in the fields of optical and radio astronomy. Largely by expertise in these areas Australia plays a significant role in international space research. Programmes in optical astronomy have been in progress for many years. However, the growth of radio astronomy has occurred mainly since the 1939–45 War.

*Mount Stromlo and Siding Spring Observatory.* The astronomical research facilities of the Australian National University are located at Mount Stromlo (Canberra) and Siding Spring Mountain (Coonabarabran). The staff of the observatory are academic staff of the University's Institute of Advanced Studies and the permanent headquarters are located at Mount Stromlo, together with the library, laboratories and offices of the scientific staff. The older telescopes are located on Mount Stromlo, the newer ones on Siding Spring Mountain.

The observatory is the principal centre of optical astronomical research in the southern hemisphere. The research facilities are second only to the great observatories of the south-western United States, and because of their latitude observations can be made on parts of the sky permanently inaccessible to northern astronomers. The functions of the observatory are to carry out original investigations (both observational and theoretical) in astronomy and astrophysics, and to provide post-graduate training for future Australian astronomers.

The direction of the research conducted depends on the steadily widening interests of the staff and scholars as the subject of astronomy itself rapidly progresses. Areas of permanent interest to which the observatory has made important contributions include the evolution of stars and of stellar systems, the study of the Magellanic clouds and their globular star clusters, the chemical composition of the stars and the study of pulsating stars. The results of the work carried out at the observatory are published in international scientific periodicals, principally in the *Monthly Notices of the Royal Astronomical Society* and the *Astrophysical Journal*.

Mount Stromlo is situated at 35° 19' 16" south latitude and 149° east longitude at an altitude of 2,560 feet. It is the summit of a ridge of low hills in the Australian Capital Territory seven miles west of the city of Canberra. The first regular scientific work was started at this site in 1925, and the facilities were incorporated in the Australian National University in 1957. The main instruments are 30-inch, 50-inch and 74-inch reflecting telescopes and associated spectrographs, photometers and spectral scanners.

The Siding Spring astronomical site was established in 1965. It is located at 31° 16' south latitude and 148° 41' east longitude at an altitude of 3,820 feet and occupies the summit of Siding Spring Mountain in the Warrumbungle Ranges, near Coonabarabran, New South Wales. This site has some of the best environmental conditions for astronomical research to be found anywhere in Australia—considerably better than at Mount Stromlo.

*The Anglo-Australian telescope project.* Early in 1967, the United Kingdom and the Australian Government agreed to collaborate in the construction and operation of a 150-inch optical telescope to be located at Siding Springs (and quite separate from the existing Australian National University facilities). The *Anglo-Australian Telescope Agreement Act 1970* established the Anglo-Australian Telescope Board in February 1971 and this Board is the constructing and operating authority. The new instrument, which is scheduled for completion at the end of 1974, will be one of the largest optical telescopes in the southern hemisphere. It will play an important part in complementing the work of the existing 210 feet radio telescope located at Parkes (New South Wales).

### Agreement with United States of America

In the fields of civil science a formal agreement with the United States relating to scientific and technical co-operation was signed in October 1968. This agreement was to broaden and expand already existing co-operation between the Australian and American civilian scientific communities by providing additional channels for scientific collaboration in the civil field between the two countries. Since the signing of the agreement, co-operative research activities have been arranged in a number of fields including atmospheric sciences, arid lands research, problems of drug dependence, photosynthesis and biomedical research.



## Funding of Scientific Research in Australia

A substantial proportion of the Commonwealth Government's overall financial support for research in Australia is devoted to research carried out within the Commonwealth's own agencies. In addition, the Commonwealth Government has established a number of fund granting schemes to promote research which is carried out in other sectors of the economy.

For example, support for research in the natural and social sciences and in the humanities is provided through the *Australian Research Grants Committee* which was established in 1965. The majority of the research supported under this scheme is carried out in the universities. Funds for allocation by the Committee are \$13.25 million for the 1970-72 triennium. A brief description of the history and activities of the Australian Research Grants Committee is given on page 657.

For over 30 years Commonwealth moneys have been allocated by the *National Health and Medical Research Council* for the support of medical research.

To encourage industrial research and development in Australia the Government introduced the *Industrial Research and Development Grants Act 1967*. The legislation, administered by the *Australian Industrial Research and Development Grants Board*, provides for the payment of grants to Australian manufacturing and mining companies for increased research and development expenditure.

Companies employing professional research staff are assisted in their own research and development, but the Act also provides for companies to contract research and development with approved research organisations.

The first grants to industry under this Act were made in 1968 and the Government provided \$13 million for this purpose in 1971-72. Special taxation concessions also apply to expenditure on research and development.

The Commonwealth Government also contributes to *Research Trust Funds* which obtain portion of their revenue from levies on production by particular industries. Allocations are made from these trust funds for research in several primary industries.

A survey now in progress, project SCORE (Survey and Comparisons of Research Expenditure) is aimed at the collection of comprehensive information on financial and man-power resources devoted to scientific research and development in Australia. Data is being sought on the research and development (R and D) in both natural and social sciences from four sectors of the economy—government, business enterprise, higher education and private non-profit—for the year 1968-69. The survey will provide information on the distribution of R and D expenditure between the fields of science, the source of funds for R and D, the nature of expenditure, as well as on man-power. The analysed information will be comparable with similar data collected and published by other countries and is expected to be of considerable value and importance to those concerned with the management and planning of science and technology in Australia.

## Scientific societies

### Royal Societies

The following table contains the latest available statistical information about the Royal Societies in each State and in the Australian Capital Territory.

ROYAL SOCIETIES, DECEMBER 1971

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.
Year of charter . . .	1,866	1,859	1,884	1,880	1,913	1,844	1,930
Number of members . .	345	605	273	294	260	541	140
Volumes of transactions issued(a) . . . . .	104	114	82	95	61	105	..
Number of books in library	38,736	33,500	74,049	27,000	8,500	37,600	..
Societies on exchange list	394	336	310	369	247	320	..

(a) Cumulative total.

### Australian Academy of Science

The Australian Academy of Science is the national institution representing science in Australia. Constituted by Royal Charter in 1954, the Academy promotes scientific knowledge and research, maintains standards of scientific endeavour and achievement in the natural sciences in Australia, and recognises outstanding contributions to the advancement of science. The Academy represents

Australian science and scientists at the national and international level, co-ordinates Australian contributions to international co-operative scientific ventures, organises meetings of scientists, holds symposia, and arranges for visits of scientists from other countries to Australia. It also administers research fellowships provided by industry.

Its Fellows (designated F.A.A.) are eminent in some branch of the physical or biological sciences in Australia, occupying professional positions in universities, the Commonwealth Scientific and Industrial Research Organization, other research organisations, and industry. A few places are reserved for Fellows who have rendered conspicuous service in the cause of science. No more than nine new Fellows are elected in any one year. Its present membership is 156 Fellows.

The Academy is financed by general and special purpose grants from the Commonwealth Government and from private sources. The Academy is managed by an elected council comprising a president, treasurer, three secretaries and ten ordinary members who are drawn equally from the physical sciences and biological sciences. Chief administrative officer is the Executive Secretary, who is not a Fellow. Its conference centre and principal offices are in Canberra.

#### **Australian and New Zealand Association for the Advancement of Science (ANZAAS)**

This Association was founded in 1887. Its objects are 'the advancement of science and scholarship through the communication of knowledge and the promotion of a spirit of co-operation among scientific workers, scholars and those in sympathy with science and scholarship generally, especially in Australia, New Zealand and the Australian Territories'. The 44th ANZAAS Congress was held in Sydney on 14 to 18 August 1972, and the 45th Congress will be held in Perth, 13 to 17 August 1973. Further ANZAAS Congresses are set down for Canberra, January 1975, Hobart 1976, Melbourne 1977, New Zealand 1979 and Adelaide 1980.

The ANZAAS Central Office is in Sydney and Divisions operate in New South Wales, Victoria, South Australia, Western Australia, Papua New Guinea, the Australian Capital Territory, and New Zealand.

#### **Other scientific societies**

There are more than 200 other learned societies devoted to the study of particular sciences. Some of these, including the Royal Australian Chemical Institute and the Institution of Engineers, Australia, are qualifying bodies, admission to which is by qualification only. Others, such as the Institute of Food Technologists, are open to any interested person. Some societies, such as the Australian Biochemical Society, have annual symposia of a very high standard. A great many of these bodies publish appropriate journals.

The Australian Academy of the Humanities is concerned with the advancement of scholarship and of interest in an understanding of Language, Literature, History, Philosophy and the Fine Arts.

The Academy of the Social Sciences in Australia encourages the advancement of the social sciences in Australia and acts as the Australian member of international non-governmental organisations concerned with social sciences.

## CHAPTER 20

### EMPLOYMENT AND UNEMPLOYMENT

Further detail on subjects dealt with in this chapter is contained in the *Labour Report* (6.7) and other publications of this Bureau. For subjects relating to population censuses reference should be made to the series of mimeographed and printed publications listed in the *Publications of the Commonwealth Bureau of Census and Statistics* (1.8). Detailed information on the labour force and on employment and unemployment is contained in mimeographed bulletins *The Labour Force* (6.22) and *Employment and Unemployment* (6.4). Current information is also available in the *Monthly Review of Business Statistics* (1.4), the *Digest of Current Economic Statistics* (1.5), and the *Quarterly Summary of Australian Statistics* (1.3), and preliminary employment estimates are issued in a monthly statement *Employed Wage and Salary Earners* (6.12).

#### THE LABOUR FORCE

This chapter contains a number of series relating to the labour force and its components. The labour force comprises two categories of persons: those who are employed and those who are unemployed. In the first category are included employers, self-employed persons, wage and salary earners, and unpaid helpers. Comprehensive details for each State and Territory and for Australia as a whole in respect of persons in the labour force, classified according to industry, occupation and occupational status (i.e. whether employers, self-employed persons, wage and salary earners or unpaid helpers) and personal characteristics such as age, sex, marital status and birthplace, are obtained only at a general census of population. Information about the labour force questions in the population census of June 1966 and a table showing the industry and occupational status of the labour force are given on this and the following two pages.

In the periods between population censuses, estimates of the labour force for the whole of Australia are obtained through the population survey, which is carried out by means of personal interviews at a sample of households throughout Australia in February, May, August and November each year (see pages 694–702). The survey provides, in addition to particulars of the demographic composition of the labour force, broad estimates of occupational status, occupation, industry and hours of work.

Detailed industry estimates for each State and Territory are obtained only in respect of wage and salary earners, through a monthly collection from employers. These estimates, which exclude employees in agriculture and private domestic service, are based on benchmarks derived from the population census, but they do not agree exactly with census figures at relevant dates because of a different method of allocating employees to industries. Further information about estimates of employed wage and salary earners is given on pages 711–2.

#### The population census\*

A new definition of the labour force† was adopted at the 1966 census, which conformed closely to the recommendations of the Eighth International Conference of Labour Statisticians, held in Geneva in 1954. At the census the following questions were asked.

16. 'Did the person have a job or business of any kind last week (even though he may have been temporarily absent from it)? ANSWER "YES" or "NO".'
17. 'Did the person do any work at all last week for payment or profit? ANSWER "YES" or "NO". Persons working without pay as a helper in a "family business" or farm and members of the clergy and of religious orders (other than purely contemplative orders) should answer "YES" to this question. Persons doing only unpaid housework should answer "NO".'
18. 'Was the person temporarily laid off by his employer without pay for the whole of last week? ANSWER "YES" or "NO".'

\* Particulars of Aborigines are not included in the table on page 693. See page 123, Chapter 7, Population. † The term 'work force' has been used in 1966 Census publications and has the same meaning as the term 'labour force'.

19. 'Did the person look for work last week? ANSWER "YES" or "NO". (Note. "Looking for work" means (i) being registered with Commonwealth Employment Service, or (ii) approaching prospective employers, or (iii) placing or answering advertisements, or (iv) writing letters of application, or (v) awaiting the result of recent applications).'

The labour force includes all persons for whom the answer 'yes' was given to any one of these four questions, except that persons helping but not receiving wages or a salary who usually worked less than fifteen hours a week were excluded from the labour force. Persons under fifteen years of age were also excluded by definition from the labour force.

Persons in the labour force were classified into two categories: those employed and those unemployed. A person was considered to be unemployed if he answered the above questions in any one of the following ways.

<i>Question No.</i>	<i>In labour force—Unemployed</i>				
16.	No	No	No	Yes	Yes
17.	No	No	No	No	No
18.	No	Yes	Yes	Yes	Yes
19.	Yes	No	Yes	No	Yes

The net effect of the new definition was to include approximately 108,000 additional persons in the Australian labour force, i.e. a proportionate increase of approximately 2.3 per cent. The major factor in this change was females working part-time (sometimes for only a few hours a week), some of whom, at earlier censuses, did not consider themselves as '... engaged in an industry, business, profession, trade or service.'

#### **Industry and occupational status of the labour force**

At the 1966 census persons in the labour force were asked to state industry in accordance with the following instructions.

'State the exact branch of industry, business or service in which mainly engaged last week, using two or more words where possible. For example, "Dairy Farming", "Coal Mining", "Woollen Mills", "Retail Grocery", "Road Construction", etc. Employees should state the industry of their employer. For example, a carpenter employed by a coal mining company should state "Coal Mining". If employed by a Government Department or other public body, state also its name. For paid housekeepers and domestic servants in private households, write "P.H.".'

From the answers to this question, persons were classified according to the Bureau's *Classification of Industries*, which provides for each person to be classified according to the nature of the business in which mainly engaged, regardless of whether operated by a government authority, corporation, or individual.

Males and females in the labour force at the 1966 census are classified in the following table according to industry and occupational status. Only the major industry groups are shown. Persons in the labour force in each industry sub-group are shown for Australia on pages 1117-19 of Year Book No. 55.



**LABOUR FORCE, BY INDUSTRY AND OCCUPATIONAL STATUS: AUSTRALIA, CENSUS  
30 JUNE 1966**

	Employed				Total	Un- employed	Total in the labour force	Proportion of total (per cent)
Industry (major group)	Employer	Self- employed	Employee (on wage or salary)	Helper (not on wage or salary)				
MALES								
Primary production . . .	74,684	156,171	138,337	8,085	377,277	4,065	381,342	11.14
Mining and quarrying . . .	500	1,600	51,424	66	53,590	437	54,027	1.58
Manufacturing . . .	26,073	20,629	934,120	820	981,642	6,935	988,577	28.89
Electricity, gas, water and sanitary services (production, supply and maintenance) . . .	275	232	97,968	75	98,550	365	98,915	2.89
Building and construction . . .	33,649	39,479	334,191	447	407,766	5,812	413,578	12.09
Transport and storage . . .	11,906	25,700	213,040	251	250,897	1,926	252,823	7.39
Communication . . .	..	5	80,163	46	80,214	246	80,460	2.35
Finance and property . . .	4,358	6,633	95,895	142	107,028	334	107,362	3.14
Commerce . . .	56,144	39,978	379,170	957	476,249	3,243	479,492	14.01
Public authority (n.e.i.) and defence services . . .	..	..	162,990	3	162,993	418	163,411	4.78
Community and business services (including professional)	22,658	7,734	198,531	1,223	230,146	819	230,965	6.75
Amusement, hotels and other accommodation, cafes, personal service, etc. . .	19,374	16,289	88,029	552	124,244	1,458	125,702	3.67
Other industries . . .	6	15	67	..	88	4	92	..
Industry inadequately described or not stated . . .	764	1,343	23,193	381	25,681	19,387	45,068	1.32
Total males in labour force	250,391	315,808	2,797,118	13,048	3,376,365	45,449	3,421,814	100.00
FEMALES								
Primary production . . .	12,747	21,747	24,272	16,108	74,874	433	75,307	5.25
Mining and quarrying . . .	40	54	2,193	19	2,306	10	2,316	0.16
Manufacturing . . .	5,333	5,056	308,952	1,151	320,492	3,056	323,548	22.55
Electricity, gas, water and sanitary services (production, supply and maintenance) . . .	31	10	7,038	10	7,089	31	7,120	0.50
Building and construction . . .	2,296	846	11,253	566	14,961	90	15,051	1.05
Transport and storage . . .	1,431	1,321	21,878	468	25,098	166	25,264	1.76
Communication . . .	2	4	22,957	49	23,012	177	23,189	1.62
Finance and property . . .	674	1,474	70,125	225	72,498	361	72,859	5.08
Commerce . . .	21,367	20,330	257,748	4,332	303,777	2,589	306,366	21.35
Public authority (n.e.i.) and defence services . . .	..	..	46,365	4	46,369	273	46,642	3.25
Community and business services (including professional)	2,929	5,389	301,888	3,236	313,442	2,575	316,017	22.03
Amusement, hotels and other accommodation, cafes, personal service, etc. . .	12,835	11,067	139,833	3,001	166,736	2,431	169,167	11.79
Other industries . . .	..	2	26	..	28	7	35	..
Industry inadequately described or not stated . . .	536	1,119	26,914	3,148	31,717	20,043	51,760	3.61
Total females in labour force	60,221	68,419	1,241,442	32,317	1,402,399	32,242	1,434,641	100.00
PERSONS								
Primary production . . .	87,431	177,918	162,609	24,193	452,151	4,498	456,649	9.40
Mining and quarrying . . .	540	1,654	53,617	85	55,896	447	56,343	1.16
Manufacturing . . .	31,406	25,685	1,243,072	1,971	1,302,134	9,991	1,312,125	27.02
Electricity, gas, water and sanitary services (production, supply and maintenance) . . .	306	242	105,006	85	105,639	396	106,035	2.18
Building and construction . . .	35,945	40,325	345,444	1,013	422,727	5,902	428,629	8.83
Transport and storage . . .	13,337	27,021	234,918	719	275,995	2,092	278,087	5.73
Communication . . .	2	9	103,120	95	103,226	423	103,649	2.13
Finance and property . . .	5,032	8,107	166,020	367	179,526	695	180,221	3.71
Commerce . . .	77,511	60,308	636,918	5,289	780,026	5,832	785,858	16.18
Public authority (n.e.i.) and defence services . . .	..	..	209,355	7	209,362	691	210,053	4.33
Community and business services (including professional)	25,587	13,123	500,419	4,459	543,588	3,394	546,982	11.26
Amusement, hotels and other accommodation, cafes, personal service, etc. . .	32,209	27,356	227,862	3,553	290,980	3,889	294,869	6.07
Other industries . . .	6	17	93	..	116	11	127	..
Industry inadequately described or not stated . . .	1,300	2,462	50,107	3,529	57,398	39,430	96,828	1.99
Total persons in labour force	310,612	384,227	4,038,560	45,365	4,778,764	77,691	4,856,455	100.00

### The population survey

The population survey is the general title given to the household sample survey carried out in February, May, August and November of each year in all States and Territories. Emphasis in the survey is placed on the collection of data on demographic and labour force characteristics, the principal survey component being referred to as the labour force survey. The remaining part of the population survey consists of supplementary collections which are carried out from time to time in conjunction with the labour force survey.

The population survey was instituted in November 1960 in the six State capital cities, and was extended in February 1964 to include non-metropolitan areas. The survey is based on a sample of dwellings selected by area sampling methods. Information is obtained each quarter from the occupants of selected dwellings by carefully chosen and specially trained interviewers during a four-week period on each occasion. Prior to the reselection of the sample in 1972 (using data from the 1971 Census of Population and Housing), the sample framework was extensively redesigned with a view to improving its efficiency, thus enabling economies to be made in the overall size of the sample. There are now about 27,000 households in the sample representing two-thirds of one per cent of all households in Australia.

A description of the labour force survey and a selection of principal statistics obtained from it are given in this section. Data from supplementary surveys are published in mimeographed bulletins which are available on request. Results of surveys covering leavers from schools, universities or other educational institutions, and surveys of multiple jobholding may be found in this and earlier issues of the Year Book. Results of the surveys Chronic Illnesses, Injuries and Impairments, May 1968; Post-school Study Courses, August 1968; and Child Care, May 1969 were given in Year Book No. 56; and Labour Force Experience during 1968 in Year Book No. 57.

### The labour force survey

The labour force survey commenced in November 1960, and until November 1963 it was confined to the six State capital cities. The first survey for the whole of Australia was carried out in February 1964. Estimates are published quarterly in the mimeographed bulletin *The Labour Force* (6.20). More comprehensive statistics have been published in four special bulletins entitled *The Labour Force* (6.22), covering the period 1964 to 1968, and single years thereafter.

The survey includes all persons fifteen years of age and over (including full-blood Aborigines), except members of the permanent armed forces, national servicemen enlisted in the Regular Army Supplement and certain diplomatic personnel customarily excluded from census and estimated populations.

The classification used in the survey conforms closely to that recommended by the Eighth International Conference of Labour Statisticians held in Geneva in 1954. In this classification, the labour force category to which an individual is assigned depends on his actual activity (i.e. whether working, looking for work, etc.) during a specified week, known as 'survey week', which is the week immediately preceding that in which the interview takes place. The interviews are carried out during a period of four weeks, so that there are four survey weeks in each of the months to which the survey relates. These survey weeks generally fall within the limits of the calendar month.

A person's activity during survey week is determined from answers given to a set of questions specially designed for this purpose. The principal categories appearing in the tables in this section are the employed and unemployed, who together constitute the labour force, and the remainder, who are classified as not in the labour force. Definitions of these categories are as follows:

- (i) *The labour force* comprises all persons who, during survey week, were employed or unemployed as defined in (ii) and (iii) below.
- (ii) *Employed persons* comprise all those who, during survey week,
  - (a) did any work for pay, profit, commission or payment in kind, in a job or business, or on a farm (including employees, employers and self-employed persons), or
  - (b) worked fifteen hours or more without pay in a family business (or farm), or
  - (c) had a job, business or farm, but were not at work because of illness, accident, leave, holiday, production hold-up due to bad weather, plant breakdown, etc., or because they were on strike.

A person who had a job but was temporarily laid off by his employer for the whole week without pay is excluded, and is classified in the tables as unemployed. A person who did some work during the week, however, before he either lost his job or was laid off, is classified as employed. A person who held more than one job is counted only once, in the job at which he worked most hours during survey week.

(iii) *Unemployed persons* comprise all those who, during survey week, did no work at all, and who either,

(a) did not have a job or business and were actively looking for work (including those who stated that they would have looked for work if they had not been temporarily ill or believed no work was available, or had not already made definite arrangements to start work in a new job after survey week); or

(b) were laid off from their jobs without pay for the whole week.

A person who either lost his job or was laid off *during* survey week, but did some work at his job during that week, is classified as employed.

(iv) *Persons not in the labour force* are all those who, during survey week, were not in the categories 'employed' or 'unemployed' as defined. This category therefore includes persons without a job, business or farm who were not actively looking for work, and who, during survey week, were either keeping house (unpaid), attending an educational institution (e.g. school or university), retired or voluntarily idle, permanently unable to work or inmates of institutions. A person who worked less than fifteen hours without pay in a family business during survey week is also classified as not in the labour force.

Figures of total population fifteen years of age and over for each sex are derived from the official population estimates, which in turn are based on results of population censuses. Figures of marital status and all labour force characteristics of these populations are derived from the sample survey data. For this and other reasons, including differences in timing, methods of collection (personal interview in the survey, self-enumeration in the census) and, in some cases, concepts and definitions, the survey estimates of marital status and labour force characteristics may not agree closely with the corresponding census figures.

#### Reliability of the estimates

Since the estimates which appear in the following tables are based on a sample, they may differ from the figures that would have been obtained from a complete census using the same questionnaires and procedures. One measure of the likely difference is given by the standard error, which indicates the extent to which an estimate might have varied by chance because only a sample, and not the whole population, was enumerated. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained from a comparable complete enumeration, and about nineteen chances in twenty that the difference will be less than two standard errors.

Space does not allow for the separate indication of the standard errors of all estimates in this section. A table of standard errors which is intended to be of general application is therefore given below.

The standard errors in the table are averages based on calculations for a limited number of surveys and are also averages over a wide range of labour force characteristics. These figures thus give not a precise measure but an indication of the magnitude of the standard error of any particular estimate for any particular survey. An example of the use of the table is as follows: if the estimate obtained from the sample is 100,000 and the standard error is 3 per cent of the estimate, i.e. 3,000, there are about two chances in three that the true figure is within the range 97,000 to 103,000 and about nineteen chances in twenty that this figure is within the range 94,000 to 106,000.

#### STANDARD ERRORS OF QUARTERLY ESTIMATES

Size of estimate (persons)	Approximate standard error of estimates	
	Persons	Percentage of estimate
4,000 . . . . .	750	19
5,000 . . . . .	850	17
10,000 . . . . .	1,100	11
20,000 . . . . .	1,400	7
50,000 . . . . .	2,000	4
100,000 . . . . .	3,000	3
200,000 . . . . .	4,000	2
500,000 . . . . .	5,000	1
1,000,000 . . . . .	5,500	0.6
2,000,000 . . . . .	8,000	0.4



The standard errors of estimates relating to agricultural employment are generally somewhat higher than the standard errors of other estimates of the same magnitude. Estimates for females also tend to have higher standard errors relative to estimates of equivalent size for males in similar employment categories.

The reliability of an estimated percentage, computed by using sample data for both numerator and denominator, depends upon both the size of the percentage and the size of the denominator. Percentages quoted in the following tables, and any other percentages calculated from figures shown, have generally somewhat lower proportional standard errors than have the estimates which form the numerators of the percentages, particularly where the percentages are large.

As the standard errors in the table show, the smaller the estimate the higher is the relative standard error. Very small estimates would thus be subject to such high standard errors (relative to the size of the estimate) as to detract seriously from their value for most reasonable uses. In the following tables, estimates less than 4,000 have not been shown. Although figures for these small components can be derived by subtraction, they should not be regarded as reliable.

The imprecision due to sampling variability, which is measured by the standard error, should not be confused with inaccuracies that may occur because of imperfections in reporting by interviewers and respondents. Inaccuracies of this kind are referred to as the non-sampling error, and they may occur in any enumeration, whether it be a full count or only a sample. Every effort is made to reduce the non-sampling error to a minimum by careful design of questionnaires, intensive training and supervision of interviewers and efficient operating procedures.

#### CIVILIAN POPULATION 15 YEARS OF AGE AND OVER(a) BY EMPLOYMENT STATUS AUSTRALIA

May—	Employed(b)			Unemployed(b)		Total labour force(b)		Not in labour force(b) ('000)	Civilian population aged 15 and over (a) ('000)
	Agri- culture ('000)	Other Industries ('000)	Total ('000)	Number ('000)	Per cent of labour force	Number ('000)	Per cent of popu- lation(c)		
MALES									
1968 . . .	359.9	3,099.2	3,459.1	37.7	1.1	3,496.8	83.4	698.5	4,195.3
1969 . . .	350.8	3,193.6	3,544.4	35.4	1.0	3,579.8	83.3	715.1	4,294.9
1970 . . .	352.5	3,278.3	3,630.8	33.9	0.9	3,664.7	83.4	731.5	4,396.2
1971 . . .	341.9	3,342.2	3,684.1	44.0	1.2	3,728.1	82.9	767.1	4,495.2
1972 . . .	345.3	3,371.3	3,716.6	61.0	1.6	3,777.6	82.5	800.1	4,577.7
MARRIED WOMEN									
1968 . . .	41.2	776.6	817.7	21.6	2.6	839.3	30.2	1,940.2	2,779.6
1969 . . .	40.7	835.8	876.6	23.2	2.6	899.7	31.4	1,964.0	2,863.7
1970 . . .	49.9	912.6	962.5	22.0	2.2	984.5	33.5	1,958.4	2,943.0
1971 . . .	50.3	990.2	1,040.4	24.1	2.3	1,064.5	35.2	1,962.3	3,026.8
1972 . . .	51.7	1,012.8	1,064.5	27.8	2.5	1,092.3	35.2	2,011.8	3,104.1
OTHER FEMALES(d)									
1968 . . .	11.9	696.5	708.4	19.3	2.6	727.6	49.2	750.3	1,477.9
1969 . . .	11.5	689.9	701.4	16.5	2.3	717.9	48.1	774.5	1,492.4
1970 . . .	14.2	706.7	720.9	15.6	2.1	736.5	48.6	778.3	1,514.8
1971 . . .	11.6	706.5	718.0	14.6	2.0	732.6	47.9	797.8	1,530.4
1972 . . .	11.1	670.2	681.2	21.4	3.0	702.6	45.6	839.4	1,542.0
ALL FEMALES									
1968 . . .	53.1	1,473.0	1,526.1	40.9	2.6	1,567.0	36.8	2,690.5	4,257.5
1969 . . .	52.3	1,525.7	1,578.0	39.7	2.5	1,617.6	37.1	2,738.5	4,356.1
1970 . . .	64.1	1,619.2	1,683.4	37.7	2.2	1,721.1	38.6	2,736.7	4,457.8
1971 . . .	61.8	1,696.6	1,758.4	38.7	2.2	1,797.1	39.4	2,760.1	4,557.2
1972 . . .	62.8	1,683.0	1,745.8	49.2	2.7	1,794.9	38.6	2,851.2	4,646.1
PERSONS									
1968 . . .	413.0	4,572.2	4,985.2	78.5	1.6	5,063.7	59.9	3,389.1	8,452.8
1969 . . .	403.1	4,719.3	5,122.4	75.1	1.4	5,197.4	60.1	3,453.6	8,651.0
1970 . . .	416.7	4,897.5	5,314.2	71.5	1.3	5,385.8	60.8	3,468.2	8,854.0
1971 . . .	403.7	5,038.8	5,442.5	82.7	1.5	5,525.1	61.0	3,527.3	9,052.4
1972 . . .	408.1	5,054.3	5,462.4	110.2	2.0	5,572.6	60.4	3,651.2	9,223.8

(a) For a note on persons excluded see explanatory notes on page 694. (b) For definitions see page 694. (c) The labour force in each group as a percentage of the civilian population aged 15 years and over in the same group (labour force participation rate). (d) Never married, widowed and divorced.

NOTE. Discontinuity indicated by horizontal line. At the 1971 population census, trainee teachers were for the first time classified as not in the labour force. They have been likewise excluded from the labour force estimates from August 1971. In consequence there is now a break in the labour force series between May and August 1971, the numbers of males and females excluded being approximately 7,000 and 17,000 respectively.



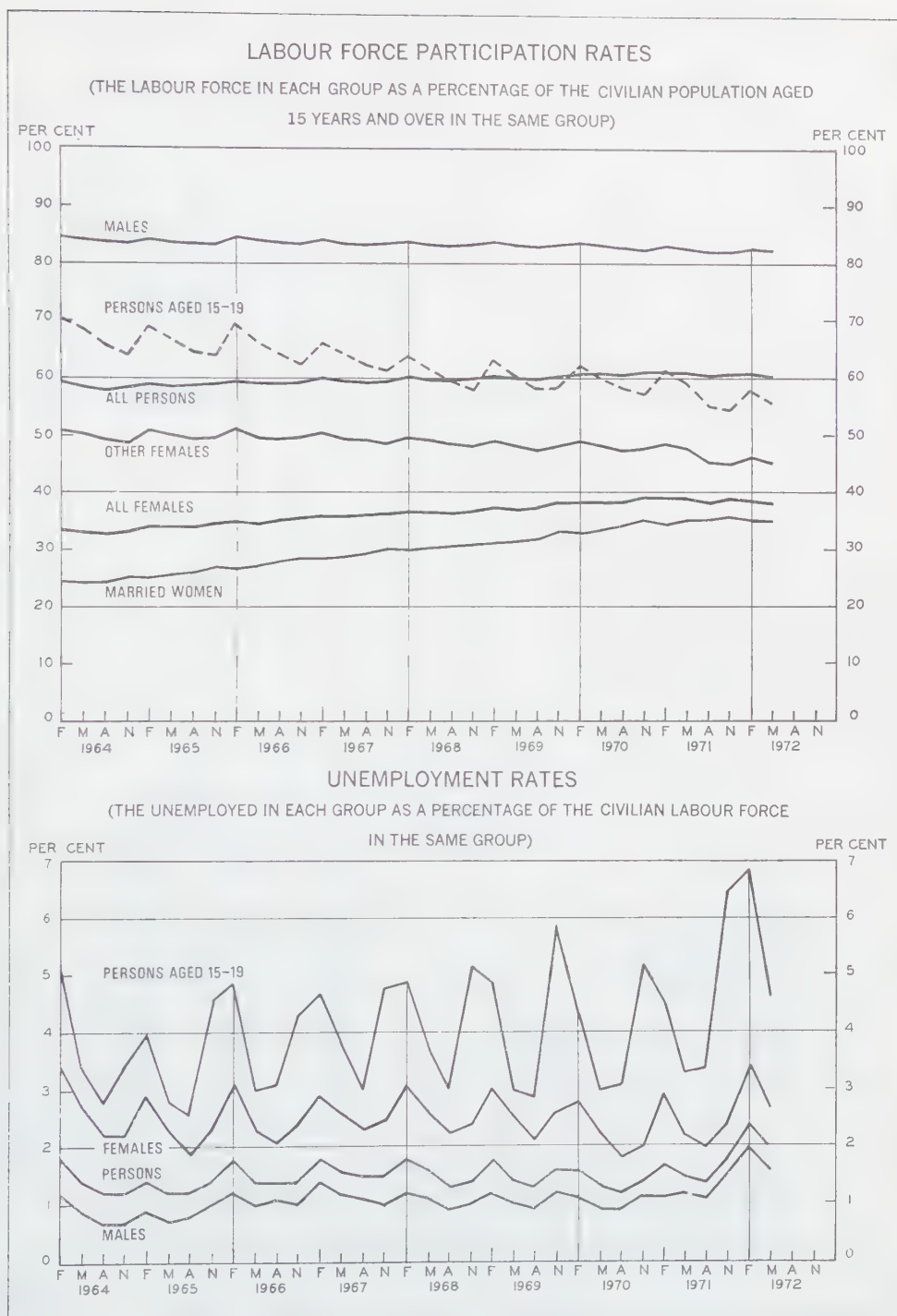


PLATE 38

**CIVILIAN LABOUR FORCE(a), BY AGE AND MARITAL STATUS  
AUSTRALIA, MAY 1972**

Age group (years)	Married			Not married(b)			Total		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
NUMBER ('000)									
15-19 . . .	7.9	19.4	27.3	322.1	286.1	608.2	329.9	305.5	635.4
20-24 . . .	193.6	165.4	359.0	306.2	162.3	468.5	499.8	327.7	827.5
25-34 . . .	727.7	276.3	1,004.0	173.0	74.5	247.5	900.7	350.8	1,251.5
35-44 . . .	680.2	296.8	976.9	79.0	47.6	126.6	759.2	344.3	1,103.5
45-54 . . .	631.6	242.8	874.4	79.4	62.5	141.9	711.0	305.3	1,016.3
55-59 . . .	244.4	62.6	307.0	34.6	30.7	65.3	279.0	93.2	372.2
60-64 . . .	171.2	21.7	192.8	26.4	20.9	47.2	197.6	42.5	240.1
65 and over .	81.4	7.4	88.8	19.0	18.1	37.2	100.5	25.5	126.0
<b>Total .</b>	<b>2,738.0</b>	<b>1,092.3</b>	<b>3,830.3</b>	<b>1,039.7</b>	<b>702.6</b>	<b>1,742.3</b>	<b>3,777.6</b>	<b>1,794.9</b>	<b>5,572.6</b>

PER CENT OF POPULATION(c)									
15-19 . . .	98.4	41.4	49.7	56.6	55.8	56.2	57.2	54.6	55.9
20-24 . . .	97.8	46.9	65.2	88.0	85.8	87.2	91.5	60.5	76.1
25-34 . . .	98.9	35.2	66.0	91.4	81.0	88.0	97.4	40.0	69.4
35-44 . . .	99.0	44.5	72.2	89.7	75.3	83.7	98.0	47.2	73.3
45-54 . . .	97.2	39.3	69.0	89.6	59.0	72.9	96.3	42.2	69.5
55-59 . . .	92.7	25.9	60.8	80.4	41.1	55.5	91.0	29.5	59.8
60-64 . . .	78.3	12.6	49.4	71.1	22.2	36.0	77.3	16.0	46.1
65 and over .	24.6	3.3	16.0	15.4	4.4	7.0	22.1	4.0	11.6
<b>Total .</b>	<b>88.6</b>	<b>35.2</b>	<b>61.8</b>	<b>70.0</b>	<b>45.6</b>	<b>57.5</b>	<b>82.5</b>	<b>38.6</b>	<b>60.4</b>

(a) Aged 15 years and over. For definitions see page 694. (b) Never married, widowed and divorced. (c) The labour force in each group as a percentage of the civilian population in the same group.

**CIVILIAN LABOUR FORCE(a), BY INDUSTRY, AUSTRALIA, MAY 1972  
('000)**

Industry group	Males	Females	Persons
Agriculture . . . . .	349.1	63.9	413.0
Manufacturing . . . . .	1,079.0	372.5	1,451.5
Building and construction . . . . .	464.3	25.8	490.0
Transport and storage . . . . .	261.0	34.0	295.0
Finance and property . . . . .	142.7	104.8	247.5
Commerce . . . . .	585.3	420.4	1,005.8
Community and business services(b) . . . . .	291.9	439.8	731.7
Amusement, hotels, personal service, etc. . . . .	152.1	218.1	370.2
Other industries . . . . .	448.6	107.8	556.5
No previous work experience(c) . . . . .	*	7.9	11.6
<b>Total . . . . .</b>	<b>3,777.6</b>	<b>1,794.9</b>	<b>5,572.6</b>

(a) Aged 15 years and over. For definitions see page 694. (b) Comprises law, order and public safety; religion and social welfare; health, hospitals, etc.; education; and other community and business services (including professional). (c) Looking for first job.

\* Estimates less than 4,000 are not published because they would be subject to sampling variability too high for most practical purposes. Although figures for these small components can be derived by subtraction, they should not be regarded as reliable.

**CIVILIAN LABOUR FORCE(a), BY OCCUPATION, AUSTRALIA, MAY 1972**  
(<sup>'000</sup>)

<i>Occupation group</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
Professional, technical and related workers . . .	359.7	254.7	614.4
Administrative, executive and managerial workers . .	315.5	36.9	352.3
Clerical workers . . . . .	320.7	574.3	895.0
Sales workers . . . . .	242.0	239.3	481.3
Farmers, fishermen, timber getters, etc. . . . .	400.8	58.2	459.0
Transport and communication workers . . . . .	294.6	50.4	345.1
Craftsmen, production-process workers and labourers, n.e.c.(b) . . . . .	1,670.6	270.7	1,941.3
Service, sport and recreation workers . . . . .	170.2	302.4	472.6
No previous work experience(c) . . . . .	*	7.9	11.6
<b>Total . . . . .</b>	<b>3,777.6</b>	<b>1,794.9</b>	<b>5,572.6</b>

(a) Aged 15 years and over. For definitions see page 694. (b) Includes miners, quarrymen and related workers. (c) Looking for first job.

\* Less than 4,000. See footnote \* to previous table.

**EMPLOYED PERSONS(a), BY HOURS WORKED(b), AUSTRALIA**  
(<sup>'000</sup>)

<i>May</i>	<i>Hours worked during survey week</i>							<i>Average hours worked(d)</i>		
	<i>0(c)</i>	<i>1-29</i>	<i>30-34</i>	<i>35-39</i>	<i>40</i>	<i>41-48</i>	<i>49 and over</i>	<i>Total</i>	<i>Full-time workers</i>	<i>All persons</i>
<b>MALES</b>										
1968 . . . . .	188.7	142.6	111.9	256.8	1,613.8	489.6	655.7	3,459.1	..	41.0
1969 . . . . .	194.1	167.5	227.3	282.8	1,474.0	504.1	694.6	3,544.4	..	40.8
1970 . . . . .	217.3	165.3	157.0	320.6	1,449.3	547.1	774.3	3,630.8	..	41.2
1971 . . . . .	225.9	175.3	149.2	322.9	1,461.2	561.6	797.8	3,693.9	42.0	41.1
1972 . . . . .	224.3	155.1	128.3	316.9	1,620.6	513.4	758.0	3,716.6	41.7	40.9
<b>MARRIED WOMEN</b>										
1968 . . . . .	55.9	226.8	58.4	84.7	307.2	38.8	46.0	817.7	..	31.1
1969 . . . . .	63.4	256.8	85.8	95.7	286.7	41.6	46.6	876.6	..	30.2
1970 . . . . .	68.4	285.0	68.7	121.6	311.0	51.6	56.2	962.5	..	30.6
1971 . . . . .	86.0	299.8	74.6	125.2	341.7	55.3	57.7	1,040.4	..	30.2
1972 . . . . .	86.0	293.1	76.6	127.6	373.6	53.8	53.9	1,064.5	38.1	30.5
<b>OTHER FEMALES(e)</b>										
1968 . . . . .	42.8	65.8	42.6	135.7	348.2	46.7	26.6	708.4	..	35.2
1969 . . . . .	41.1	68.2	53.7	141.0	325.4	48.5	23.5	701.4	..	34.9
1970 . . . . .	51.2	72.9	43.6	153.7	315.9	56.2	27.4	720.9	..	34.5
1971 . . . . .	59.8	73.9	40.4	149.1	310.0	56.6	28.1	718.0	..	33.9
1972 . . . . .	39.6	74.1	34.3	135.8	320.2	47.2	29.9	681.2	37.7	34.8
<b>ALL FEMALES</b>										
1968 . . . . .	98.7	292.6	100.9	220.4	655.4	85.4	72.5	1,526.1	..	33.0
1969 . . . . .	104.5	325.0	139.4	236.8	612.1	90.0	70.1	1,578.0	..	32.3
1970 . . . . .	119.7	357.8	112.3	275.3	626.9	107.8	83.6	1,683.4	..	32.2
1971 . . . . .	145.8	373.7	115.1	274.3	651.7	112.0	85.9	1,758.4	37.4	31.7
1972 . . . . .	125.6	367.3	111.0	263.3	693.8	101.0	83.8	1,745.8	37.9	32.2

For footnotes see next page.

EMPLOYED PERSONS(a), BY HOURS WORKED(b), AUSTRALIA—continued  
(<sup>'000</sup>)

May	Hours worked during survey week							Average hours worked(d)	
	0(c)	1-29	30-34	35-39	40	41-48	49 and over	Total	All persons
PERSONS									
1968 . . .	287.4	435.3	212.8	477.2	2,269.2	575.0	728.3	4,985.2	38.6
1969 . . .	298.6	492.5	366.7	519.6	2,086.1	594.1	764.7	5,122.4	38.2
1970 . . .	336.9	523.1	269.3	595.9	2,076.2	654.9	857.9	5,314.2	38.3
1971 . . .	371.7	549.0	264.3	597.2	2,112.9	673.6	883.7	5,452.3	38.1
1972 . . .	349.9	522.3	239.3	580.3	2,314.4	614.5	841.8	5,462.4	38.1

(a) Civilians 15 years of age and over. For definitions see page 694. (b) Actual hours worked during survey week, not hours paid for. The figures may be affected by public holidays, leave, absenteeism; temporary absence from work due to sickness, accidents, and industrial disputes; and work stoppages due to bad weather, plant breakdown, etc. (c) Excludes persons laid off for the whole of survey week without pay; these persons are classified as unemployed. (d) Persons with jobs who did not work during survey week have been included in the calculation of average hours worked. When recording hours worked, fractions of an hour are disregarded. This procedure results in slight lowering of the average hours figures. (e) Never married, widowed and divorced.

EMPLOYED PERSONS(a) WHO WORKED LESS THAN 35 HOURS(b) BY REASON, AUSTRALIA  
(<sup>'000</sup>)

May—	Usually work 35 hours of more				Usually work less than 35 hours		
	Reason for working less than 35 hours				Reason for working less than 35 hours		
	Leave or holiday	Own illness or injury	Other reasons	Total	Lack of work	Other reasons	Total
MALES							
1968 . . .	184.0	83.6	50.3	317.9	7.1	118.2	125.2
1969 . . .	205.5	86.1	(c)159.6	451.2	7.4	130.3	137.7
1970 . . .	261.1	93.3	61.0	415.4	7.2	117.0	124.2
1971 . . .	281.2	90.0	53.0	424.2	10.5	115.6	126.1
1972 . . .	264.5	89.6	43.0	397.0	10.5	100.1	110.6
FEMALES							
1968 . . .	67.2	33.5	9.2	109.9	14.5	367.9	382.4
1969 . . .	78.0	37.3	(c)41.1	156.4	17.1	395.5	412.6
1970 . . .	115.3	36.6	7.3	159.2	13.7	416.8	430.5
1971 . . .	135.0	36.3	8.1	179.4	14.9	440.3	455.2
1972 . . .	115.6	32.6	8.6	156.9	17.0	430.0	447.0
PERSONS							
1968 . . .	251.2	117.1	59.5	427.8	21.6	486.1	507.6
1969 . . .	283.5	123.4	(c)200.7	607.6	24.5	525.7	550.2
1970 . . .	376.5	129.9	68.2	574.6	20.9	533.8	554.8
1971 . . .	416.2	126.3	61.1	603.6	25.4	555.9	581.3
1972 . . .	380.1	122.2	51.6	553.9	27.5	530.0	557.5

(a) Civilians 15 years of age and over. For definitions see page 694. by industrial disputes.

(b) See note (b) to previous table.

(c) Affected



**UNEMPLOYMENT RATES(a), STATE CAPITAL CITIES AND OTHER AREAS**  
(Per cent)

May—	State capital cities(b)			Other areas		
	Males	Females	Persons	Males	Females	Persons
1968 . . . .	1.1	2.2	1.5	1.1	3.5	1.7
1969 . . . .	0.9	2.0	1.3	1.1	3.6	1.7
1970 . . . .	0.9	1.7	1.2	0.9	3.3	1.6
1971 . . . .	1.2	1.8	1.4	1.2	2.9	1.7
1972 . . . .	1.8	2.4	2.0	1.4	3.4	1.9

(a) The unemployed in each group as a percentage of the labour force in the same group. (b) The figures relate to persons residing within the boundaries of the relevant Statistical Divisions. Explanatory notes on the delimitation of urban boundaries are shown on pages 131-3. Maps showing the boundaries of the capital city Statistical Divisions were published in *Census of the Commonwealth of Australia, 30 June 1966—Field Count Statement No. 4*.

**UNEMPLOYED PERSONS(a), AUSTRALIA**

May—	Age (years)				Duration of unemployment(b)				Looking for—		Total
	15-19		20 and over		Under 2 weeks ('000)	2 and under 4 weeks ('000)	4 and under 13 weeks ('000)	13 weeks and over ('000)	Full-time work(c) ('000)	Part-time work(d) ('000)	
	Number unemployed ('000)	Per cent of labour force	Number unemployed ('000)	Per cent of labour force							
MALES											
1968 .	10.5	3.2	27.2	0.9	7.1	12.5	11.9	6.2	35.7	*	37.7
1969 .	7.7	2.3	27.7	0.9	6.9	10.4	11.1	7.0	33.4	*	35.4
1970 .	8.2	2.4	25.7	0.8	8.6	13.6	8.3	*	31.5	*	33.9
1971 .	12.0	3.4	32.0	0.9	7.5	17.7	13.7	5.1	41.5	*	44.0
1972 .	14.6	4.4	46.4	1.3	10.8	17.0	21.0	12.1	58.6	*	61.0
FEMALES											
1968 .	13.3	4.2	27.6	2.2	9.3	9.5	13.2	8.9	29.5	11.4	40.9
1969 .	12.0	3.8	27.7	2.1	10.6	11.0	10.3	7.8	27.8	11.8	39.7
1970 .	11.4	3.6	26.3	1.9	10.2	9.0	13.3	5.2	23.9	13.8	37.7
1971 .	10.1	3.1	28.6	1.9	9.3	11.3	11.6	6.4	26.7	11.9	38.7
1972 .	14.7	4.8	34.4	2.3	10.0	12.4	18.3	8.4	37.1	12.1	49.2
PERSONS											
1968 .	23.8	3.7	54.8	1.2	16.4	22.0	25.0	15.1	65.1	13.4	78.5
1969 .	19.7	3.0	55.4	1.2	17.5	21.4	21.4	14.8	61.2	13.8	75.1
1970 .	19.5	3.0	52.0	1.1	18.8	22.6	21.6	8.6	55.3	16.2	71.5
1971 .	22.1	3.3	60.6	1.2	16.8	29.0	25.3	11.5	68.3	14.4	82.7
1972 .	29.4	4.6	80.8	1.6	20.9	29.5	39.4	20.5	95.7	14.5	110.2

(a) Civilians 15 years of age and over. For definitions see page 694. (b) Period from the time the person began looking for work, or was laid off, to the end of survey week. (c) Includes persons laid off from full-time jobs. (d) Includes persons laid off from part-time jobs.

\* Estimates less than 4,000 are not published because they would be subject to sampling variability too high for most practical purposes. Although figures for these small components can be derived by subtraction, they should not be regarded as reliable.

PERSONS NOT IN THE LABOUR FORCE, BY MAJOR ACTIVITY  
( '000)

May—	Kept house	Went to school, etc.	Retired or voluntarily idle	Permanently unable to work	Institutionalised (a)	Total
MALES						
1968 . . . .	14.1	218.5	364.5	53.1	48.4	698.5
1969 . . . .	11.2	223.8	381.4	46.2	52.5	715.1
1970 . . . .	10.7	234.2	391.8	45.6	49.3	731.5
1971 . . . .	13.9	246.5	415.1	36.5	55.3	767.3
1972 . . . .	11.6	275.2	424.5	36.2	52.6	800.1
MARRIED WOMEN						
1968 . . . .	1,905.3	*	15.9	6.2	10.6	1,940.2
1969 . . . .	1,930.8	*	15.6	5.4	10.9	1,964.0
1970 . . . .	1,919.2	*	22.0	*	10.4	1,958.4
1971 . . . .	1,923.8	*	21.6	*	11.6	1,962.3
1972 . . . .	1,969.2	4.4	21.3	*	13.1	2,011.8
OTHER FEMALES(b)						
1968 . . . .	423.2	168.2	92.7	21.6	44.5	750.3
1969 . . . .	432.2	184.8	94.7	21.3	41.5	774.5
1970 . . . .	416.9	186.9	101.1	16.5	56.9	778.3
1971 . . . .	436.7	193.8	103.4	13.4	50.4	797.8
1972 . . . .	442.4	221.9	103.9	13.2	58.0	839.4
ALL FEMALES						
1968 . . . .	2,328.5	170.1	108.9	27.8	55.2	2,690.5
1969 . . . .	2,363.0	186.1	110.3	26.7	52.4	2,738.5
1970 . . . .	2,336.1	190.3	123.1	19.9	67.3	2,736.7
1971 . . . .	2,360.5	197.1	125.0	15.5	62.0	2,760.1
1972 . . . .	2,411.6	226.3	125.1	17.0	71.2	2,851.2
PERSONS						
1968 . . . .	2,342.6	388.6	473.5	80.8	103.5	3,389.1
1969 . . . .	2,374.2	409.9	491.7	72.9	104.9	3,453.6
1970 . . . .	2,346.8	424.4	514.9	65.5	116.6	3,468.2
1971 . . . .	2,374.5	443.5	540.1	52.0	117.3	3,527.4
1971 . . . .	2,423.2	501.5	549.6	53.2	123.7	3,651.2

(a) Comprises inmates of gaols, patients in hospitals, sanatoria, etc., for whom, for the purpose of the survey, the institution was regarded as their dwelling. (b) Never married, widowed and divorced.

\* Less than 4,000. See footnote \* to previous table.

NOTE. For an explanation of the discontinuity in the series (indicated by horizontal line), see NOTE on page 696.

## Survey of leavers from schools, universities or other educational institutions February 1971 and 1972

Surveys based on the population survey sample (*see* page 694) have been carried out in February of each year since 1964 in order to obtain information about persons aged 15 to 24 who had attended full time at a school, university or other educational institution at some time during the previous year. Estimates for the years 1964 to 1967 were given in No. 54, pages 1162-6 and for the years 1968 to 1970 in Year Book No. 57, pages 701-4.

The main survey questions were designed to distinguish among persons who had attended full time at a school, university or other educational institution at some time in the previous year, those who were intending to return to full-time education and those who were not returning to full-time education, the latter being described in this section as 'leavers'.

The estimates relate to all persons in the age group 15 to 24 years, except members of the permanent armed forces, national servicemen enlisted in the Regular Army Supplement and certain diplomatic personnel customarily excluded from census and estimated populations. Certain categories of persons covered by the survey were not asked the survey questions. These comprised persons who were patients in hospitals and sanatoria, or inmates of gaols, reformatories, etc., and for whom, for the purposes of this survey, the institution was regarded as their dwelling, and persons reported as permanently unable to work. An estimate of the total number of such persons is shown in the first table in this section.

All persons covered by the survey were asked questions about their occupational status and those in the labour force were further questioned about their occupation and industry. Occupational status is shown for 'leavers', but not for persons returning to full-time education. Although many of these latter persons were in the labour force at the time of the surveys, their numbers would not give a useful indication of the extent of vacation employment because, in the years 1971 and 1972, the 'survey week' extended from the second week in February to the first week in March. Hence, between the first and last survey weeks, the level of vacation jobholding would have decreased substantially.

For further details reference should be made to the periodic mimeographed bulletins *Survey of Leavers from Schools, Universities or Other Educational Institutions* (6.9).

CIVILIANS AGED 15 TO 24 YEARS(a), BY ATTENDANCE OR NON-ATTENDANCE FULL  
TIME AT A SCHOOL, UNIVERSITY, ETC., IN THE PREVIOUS YEAR  
AUSTRALIA, FEBRUARY 1971 AND 1972  
(<sup>0000</sup>)

	<i>Males</i>		<i>Females</i>		<i>Persons</i>	
	<i>1971</i>	<i>1972(b)</i>	<i>1971</i>	<i>1972(b)</i>	<i>1971</i>	<i>1972(b)</i>
Attended school, university, etc., full time in previous year(c)—						
Returning to full-time education	247.9	262.8	194.0	225.4	441.9	488.2
Not returning to full-time education ('leavers')	103.3	101.2	100.5	92.0	203.8	193.1
<i>Total</i>	<i>351.2</i>	<i>364.0</i>	<i>294.5</i>	<i>317.3</i>	<i>645.6</i>	<i>681.3</i>
Did not attend school, university, etc., full time in previous year(c)	741.8	744.6	784.0	774.1	1,525.8	1,518.7
In hospitals, etc.(d)	11.6	11.6	5.5	7.0	17.1	18.6
<b>Total Persons aged 15 to 24 years</b>	<b>1,104.6</b>	<b>1,120.1</b>	<b>1,084.0</b>	<b>1,098.4</b>	<b>2,188.6</b>	<b>2,218.5</b>

(a) At the time of the survey. (b) Discontinuity. At the 1971 population census, trainee teachers (enrolled at government teachers colleges and in some cases enrolled also at other institutions were for the first time classified as not in the labour force, and since then they have also been excluded from labour force estimates derived from the population survey. Thus, in the 1972 survey, trainee teachers have been included in the category 'attended full time at a school, university etc. in 1971'. It is estimated that about 7,000 male and about 17,000 female trainee teachers may have been included in the estimates of full-time students for the first time in August 1971. (c) Excludes some patients in hospitals and sanatoria and some inmates of gaols, reformatories, etc., at the time of the survey, and persons permanently unable to work. (d) Estimated numbers of persons within the scope of the survey for whom the hospital, sanatorium, gaol, reformatory, etc., was regarded as their dwelling and persons who were reported as permanently unable to work. Particulars of attendance at schools, etc., were not obtained in respect of such persons.

**'LEAVERS'(a), BY STATE AND BY TIME OF LEAVING, AUSTRALIA**  
**FEBRUARY 1971 AND 1972**  
('000)

	<i>Persons aged 15-19 years</i>			<i>Persons aged 15-24 years</i>		
	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
<b>FEBRUARY 1971</b>						
New South Wales . . . . .	33.7	31.2	65.0	37.8	33.6	71.4
Victoria . . . . .	21.2	25.5	46.6	26.1	27.8	53.9
Queensland . . . . .	13.2	13.5	26.6	14.6	14.2	28.8
South Australia . . . . .	9.3	9.6	18.8	10.5	10.3	20.7
Western Australia . . . . .	8.6	8.2	16.8	9.3	8.6	17.8
Tasmania . . . . .	*	*	5.4	*	*	5.8
<b>Australia(b)</b> . . . . .	<b>90.1</b>	<b>93.3</b>	<b>183.5</b>	<b>103.3</b>	<b>100.5</b>	<b>203.8</b>
Time of leaving—						
January-June 1970 . . . . .	6.8	6.6	13.4	8.0	7.3	15.2
July-October 1970 . . . . .	9.9	13.0	22.9	11.5	13.8	25.2
November 1970 . . . . .	33.6	30.7	65.2	39.7	34.5	74.2
December 1970(c) . . . . .	39.9	43.0	82.9	44.1	45.0	89.1
<b>FEBRUARY 1972(d)</b>						
New South Wales . . . . .	29.0	28.0	57.0	35.3	32.7	68.0
Victoria . . . . .	19.9	20.3	40.2	24.3	22.7	47.0
Queensland . . . . .	13.6	12.1	25.7	15.4	13.0	28.5
South Australia . . . . .	8.8	9.0	17.9	10.5	10.2	20.8
Western Australia . . . . .	9.9	7.5	17.4	10.8	8.1	19.0
Tasmania . . . . .	*	*	6.0	*	*	7.2
<b>Australia(b)</b> . . . . .	<b>85.0</b>	<b>81.4</b>	<b>166.4</b>	<b>101.2</b>	<b>92.0</b>	<b>193.1</b>
Time of leaving—						
January-June 1971 . . . . .	5.9	7.7	13.6	8.0	8.2	16.3
July-October 1971 . . . . .	9.7	10.2	19.9	10.8	10.7	21.5
November 1971 . . . . .	34.9	28.6	63.4	42.5	33.3	75.7
December 1971(c) . . . . .	34.5	34.9	69.4	39.8	39.8	79.6

(a) Persons aged 15 to 24 years inclusive at the time of the survey who had attended school, university, etc., full-time during the previous year and who were not returning to full-time education. See also footnotes (c) and (d) to previous table.  
(b) Includes the Northern Territory and the Australian Capital Territory. (c) Includes a small number of persons who left school, university, etc., in January or February of the year of survey. (d) See footnote (b) on previous page.

\* Estimates less than 4,000 are not published because they would be subject to sampling variability too high for most practical purposes. Although figures for these small components can be derived by subtraction, they should not be regarded as reliable.



PERSONS AGED 15 TO 24 YEARS IN FEBRUARY WHO ATTENDED FULL TIME AT A  
SCHOOL, UNIVERSITY, ETC., IN THE PREVIOUS YEAR, BY TYPE OF INSTITUTION  
ATTENDED AND WHETHER OR NOT RETURNING TO FULL-TIME EDUCATION  
FEBRUARY 1971 AND 1972, AUSTRALIA  
(<sup>'000</sup>)

	<i>Institution attended full time in previous year</i>					<i>Total</i>
	<i>School</i>	<i>University</i>	<i>College of advanced education</i>	<i>Technical college</i>	<i>Other</i>	
FEBRUARY 1971						
Males—						
Returning to full-time education in 1971(a)—						
At same type of institution . . . . .	182.8	33.4	7.9	*	*	227.2
At different type of institution . . . . .	19.2	*	*	*	*	20.7
Total . . . . .	201.9	34.1	8.4	*	*	247.9
Not returning to full-time education in 1971 ('leavers') . . . . .	87.2	9.9	*	*	*	103.3
<i>Total males</i> . . . . .	<i>289.1</i>	<i>44.0</i>	<i>12.1</i>	*	*	<i>351.2</i>
Females—						
Returning to full-time education in 1971(a)—						
At same type of institution . . . . .	143.8	17.9	*	*	*	170.1
At different type of institution . . . . .	23.0	*	*	*	*	23.8
Total . . . . .	166.8	18.2	*	*	*	194.0
Not returning to full-time education in 1971 ('leavers') . . . . .	81.1	4.7	*	6.6	6.3	100.5
<i>Total females</i> . . . . .	<i>247.9</i>	<i>22.9</i>	<i>5.0</i>	<i>8.4</i>	<i>10.2</i>	<i>294.5</i>
Persons—						
Returning to full-time education in 1971(a)—						
At same type of institution . . . . .	326.5	51.3	10.7	*	5.8	397.3
At different type of institution . . . . .	42.2	*	*	*	*	44.5
Total . . . . .	368.7	52.4	11.5	*	6.2	441.9
Not returning to full-time education 1971 ('leavers') . . . . .	168.3	14.6	5.6	7.8	7.6	203.8
<b>Total persons</b> . . . . .	<b>537.0</b>	<b>66.9</b>	<b>17.1</b>	<b>10.8</b>	<b>13.7</b>	<b>645.6</b>

For footnotes see next page.

PERSONS AGED 15 TO 24 YEARS IN FEBRUARY WHO ATTENDED FULL TIME AT A SCHOOL, UNIVERSITY, ETC., IN THE PREVIOUS YEAR, BY TYPE OF INSTITUTION ATTENDED AND WHETHER OR NOT RETURNING TO FULL-TIME EDUCATION FEBRUARY 1971 AND 1972, AUSTRALIA—*continued*  
(‘000)

	<i>Institution attended full time in previous year</i>					<i>Total</i>
	<i>School</i>	<i>University</i>	<i>College of advanced education</i>	<i>Technical college</i>	<i>Other</i>	
FEBRUARY 1972(b)						
Males—						
Returning to full-time education in 1972(a)—						
At same type of institution . . . . .	189.6	33.6	16.2	*	*	241.7
At different type of institution . . . . .	18.4	*	*	*	*	21.1
Total . . . . .	208.0	35.1	17.0	*	*	262.8
Not returning to full-time education in 1972 ('leavers') . . . . .	81.4	11.3	5.6	*	*	101.2
Total males . . . . .	289.4	46.3	22.5	*	*	364.0
Females—						
Returning to full-time education in 1972(a)—						
At same type of institution . . . . .	152.9	19.7	18.0	*	*	193.3
At different type of institution . . . . .	29.5	*	*	*	*	32.0
Total . . . . .	182.4	21.6	18.4	*	*	225.4
Not returning to full-time education in 1972 ('leavers') . . . . .	69.5	5.1	7.6	5.0	4.8	92.0
Total females . . . . .	252.0	26.6	26.0	6.8	5.9	317.3
Persons—						
Returning to full-time education in 1972(a)—						
At same type of institution . . . . .	342.5	53.3	34.3	*	*	435.0
At different type of institution . . . . .	47.9	*	*	*	*	53.2
Total . . . . .	390.4	56.6	35.4	*	*	488.2
Not returning to full-time education in 1972 ('leavers') . . . . .	151.0	16.3	13.2	6.9	5.8	193.1
Total persons . . . . .	541.4	73.0	48.6	10.0	8.4	681.3

(a) As the survey is conducted in February, the estimates shown will partly reflect expectations as to the institution to be attended. (b) See footnote (b) on page 703.

\* Less than 4,000. See footnote \* to table on page 704.

**'LEAVERS'(a) BY AGE, AUSTRALIA, FEBRUARY 1971 and 1972**  
(<sup>'000</sup>)

		Age at time of leaving (years)						
		14	15	16	17	18	19 and over	Total
FEBRUARY 1971								
Attended school in 1970—								
Males	. . . . .	*	28.8	25.3	17.0	10.1	*	87.2
Females	. . . . .	*	29.2	24.6	15.6	7.8	*	81.1
Persons	. . . . .	6.2	58.0	49.8	32.7	17.9	*	168.3
Attended any educational institu- tion(b) in 1970—								
Males	. . . . .	*	29.1	25.8	17.4	11.3	16.6	103.3
Females	. . . . .	*	29.6	29.6	19.4	10.2	8.6	100.5
Persons	. . . . .	6.2	58.7	55.4	36.8	21.5	25.2	203.8
FEBRUARY 1972(c)								
Attended school in 1971—								
Males	. . . . .	*	25.6	26.8	15.4	9.0	*	81.4
Females	. . . . .	*	25.8	20.3	15.4	4.1	*	69.5
Persons	. . . . .	5.9	51.4	47.1	30.8	13.1	*	151.0
Attended any educational institu- tion(b) in 1971—								
Males	. . . . .	*	25.8	26.8	16.0	10.7	18.8	101.2
Females	. . . . .	*	26.9	23.7	18.7	6.5	13.2	92.0
Persons	. . . . .	5.9	52.7	50.5	34.7	17.2	32.1	193.1

(a) See note (a) to table on page 704. (b) Includes school. (c) See footnote (b) on page 703.

\* Less than 4,000. See footnote \* to table on page 704.

### Survey of multiple jobholding, May 1971

In May 1971 a survey, based on the quarterly population survey (see page 694), was conducted throughout Australia in order to obtain information about the nature and extent of multiple jobholding. The results of earlier surveys of multiple jobholding, conducted in August 1966 and August 1967, were given in Year Book No. 54, pages 1162-6.

In the 1971 survey persons were classified as multiple jobholders if, during the survey week, they:

- (a) worked in a second job or held a second job from which they were temporarily absent, and
- (b) were employed in at least one of their jobs as a wage or salary earner, provided they were not employed as an unpaid family helper in their second job. Persons who by the very nature of their employment worked for more than one employer, e.g. domestics, odd-job men, baby-sitters, etc., were not counted as multiple jobholders unless they also held another job of a different kind; nor were those who worked for more than one employer solely by reason of changing jobs during the survey week.

The standard errors given in the table on page 695, and, in general, the comments on the reliability of estimates on pages 695-6 are also applicable to this survey.

Further details of the survey were published in the mimeographed bulletin *Multiple Jobholding*, May 1971 (6.10).

**PERSONS WITH MORE THAN ONE JOB(a): OCCUPATIONAL STATUS IN  
MAIN AND SECOND JOBS, AUSTRALIA, MAY 1971**

('000)

Occupational status in main job(b)	Occupational status in second job								
	Employer or self-employed			Wage or salary earner			Total		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons

**PERSONS WHO ACTUALLY WORKED IN A SECOND JOB IN SURVEY WEEK**

Employer or self-employed	..	..	..	10.6	*	12.5	10.6	*	12.5
Wage or salary earner	34.7	4.5	39.2	82.3	21.7	104.0	117.1	26.2	143.2
<b>Total</b>	<b>34.7</b>	<b>4.5</b>	<b>39.2</b>	<b>92.9</b>	<b>23.5</b>	<b>116.5</b>	<b>127.7</b>	<b>28.0</b>	<b>155.7</b>

**ALL PERSONS WHO HELD A SECOND JOB IN SURVEY WEEK**

Employer or self-employed	..	..	..	14.3	*	16.7	14.3	*	16.7
Wage or salary earner	45.6	5.9	51.5	102.5	28.6	131.1	148.1	34.5	182.6
<b>Total</b>	<b>45.6</b>	<b>5.9</b>	<b>51.5</b>	<b>116.8</b>	<b>31.0</b>	<b>147.8</b>	<b>162.4</b>	<b>36.9</b>	<b>199.3</b>

(a) Comprises only those civilians aged 15 years and over who were employed in at least one of their jobs as a wage or salary earner. (b) The main job is the job at which most hours were worked during the survey week or, where no hours were worked or the hours were equal, the job considered by the respondent to be the main job.

\* Estimates less than 4,000 are not published because they would be subject to sampling variability too high for most practical purposes. Although figures for these small components can be derived by subtraction, they should not be regarded as reliable.

**PERSONS WITH MORE THAN ONE JOB(a) AND PERSONS IN THE LABOUR FORCE  
PLACE OF BIRTH AND PERIOD OF RESIDENCE, AUSTRALIA, MAY 1971**

('000)

	Multiple jobholders			Total labour force(b)		
	Males	Females	Persons	Males	Females	Persons
Born in Australia	132.8	29.1	161.9	2,721.4	1,326.9	4,048.3
Born outside Australia—						
United Kingdom and Ireland	12.9	4.4	17.3	383.0	183.9	566.9
Other	16.7	*	20.1	623.5	286.2	909.7
<b>Total</b>	<b>29.5</b>	<b>7.9</b>	<b>37.4</b>	<b>1,006.5</b>	<b>470.1</b>	<b>1,476.7</b>
Arrived in Australia—						
Before 1954	12.9	*	15.9	390.8	148.8	539.6
1955–1961	7.2	*	9.8	230.4	119.6	350.0
1962–1966	4.5	*	5.7	164.6	84.5	249.0
After 1966	4.9	*	6.0	220.8	117.2	338.1
<b>Total</b>	<b>162.4</b>	<b>36.9</b>	<b>199.3</b>	<b>3,727.9</b>	<b>1,797.1</b>	<b>5,525.0</b>

(a) See footnote (a) to previous table. (b) For definitions see page 707.

\* Less than 4,000. See footnote \* to previous table.



**PERSONS WITH MORE THAN ONE JOB(a): HOURS WORKED IN MAIN AND  
SECOND JOBS, AUSTRALIA, MAY 1971**  
(\*000)

Hours worked in main job(b)	Hours worked in second job						Total
	0	1-4	5-9	10-14	15-19	20 and over	
0 . . . . .							8.0
1-14 . . . . .							11.0
15-24 . . . . .	19.6	7.6	8.5	5.2	4.2	5.2	13.1
25-34 . . . . .							18.2
35-40 . . . . .	13.8	18.6	25.7	17.3	10.7	16.3	102.6
41-44 . . . . .							10.2
45-48 . . . . .							14.3
49-60 . . . . .	10.2	7.2	11.4	6.5	*	7.6	17.2
61 and over . . . . .							4.7
<b>Total . . . . .</b>	<b>43.6</b>	<b>33.4</b>	<b>45.6</b>	<b>29.0</b>	<b>18.6</b>	<b>29.2</b>	<b>199.3</b>
<b>Males . . . . .</b>	<b>34.7</b>	<b>24.3</b>	<b>36.1</b>	<b>23.7</b>	<b>16.9</b>	<b>26.7</b>	<b>162.4</b>
<b>Females . . . . .</b>	<b>8.9</b>	<b>9.1</b>	<b>9.5</b>	<b>5.3</b>	<b>*</b>	<b>*</b>	<b>36.9</b>

(a) See footnote (a) to table on page 708. (b) See footnote (b) to table on page 708.

\* Less than 4,000. See footnote \* to table on page 708.

**PERSONS WITH MORE THAN ONE JOB(a): AGE AND MARITAL STATUS, AUSTRALIA  
MAY 1971**  
(\*000)

Age group (years)	Married			Not married(b)			Total		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
15-24 . . . . .	12.4	*	15.8	19.9	11.4	31.2	32.3	14.8	47.1
25-34 . . . . .	49.3	5.3	54.6	5.8	*	8.1	55.1	7.6	62.6
35-44 . . . . .	38.8	5.7	44.5	*	*	*	40.9	7.2	48.1
45-54 . . . . .	22.1	*	25.6	*	*	*	23.0	5.4	28.3
55 and over . . . . .	10.4	*	11.2	*	*	*	11.2	*	13.2
<b>Total . . . . .</b>	<b>133.0</b>	<b>18.7</b>	<b>151.8</b>	<b>29.3</b>	<b>18.2</b>	<b>47.5</b>	<b>162.4</b>	<b>36.9</b>	<b>199.3</b>

(a) See footnote (a) to first table on page 708. (b) Includes never married, widowed and divorced.

\* Less than 4,000. See footnote \* to table on page 708.

**PERSONS WITH MORE THAN ONE JOB(a): INDUSTRY OF MAIN AND SECOND JOBS  
AUSTRALIA, MAY 1971**  
(\*000)

Industry group	Main job(b)			Second job		
	Males	Females	Persons	Males	Females	Persons
Primary production . . . . .	14.8	*	15.7	28.9	*	30.5
Manufacturing . . . . .	41.5	4.6	46.1	15.4	*	17.4
Building and construction . . . . .	15.1	*	15.9	8.1	*	8.6
Transport, storage and communica- tion . . . . .	12.8	*	13.5	10.6	*	11.1
Commerce . . . . .	27.0	8.6	35.6	22.6	8.2	30.8
Public authority (n.e.i.), and com- munity and business services . . . . .	23.5	13.8	37.3	23.6	10.9	34.5
Amusement, hotels, personal service, etc. . . . .	7.0	5.0	12.0	48.4	11.9	60.4
Other industries(c) . . . . .	20.7	*	23.2	4.8	*	6.1
<b>Total . . . . .</b>	<b>162.4</b>	<b>36.9</b>	<b>199.3</b>	<b>162.4</b>	<b>36.9</b>	<b>199.3</b>

(a) See footnote (a) to table on page 708. (b) See footnote (b) to table on page 708. (c) Comprises mining and quarrying; electricity, gas, water and sanitary services; finance and property.

\* Less than 4,000. See footnote \* to table on page 708.

PERSONS WITH MORE THAN ONE JOB(a): OCCUPATION IN MAIN AND SECOND JOBS  
AUSTRALIA, MAY 1971  
(<sup>'000</sup>)

Occupation group	Main job(b)			Second job		
	Males	Females	Persons	Males	Females	Persons
Professional and technical . . . . .	22.5	7.4	29.9	24.0	8.6	32.6
Administrative, executive, managerial and clerical . . . . .	28.9	16.4	45.4	13.3	9.1	22.4
Sales . . . . .	15.3	*	18.2	15.5	5.4	20.9
Farmers, fishermen, timber getters, etc. . . . .	15.9	*	16.8	31.6	*	33.0
Transport and communication . . . . .	12.8	*	14.2	14.0	*	14.5
Craftsmen, production-process workers, etc.(c) . . . . .	60.1	*	61.9	25.2	*	26.7
Service, sport and recreation . . . . .	6.9	6.1	13.0	38.7	10.5	49.2
<b>Total . . . . .</b>	<b>162.4</b>	<b>36.9</b>	<b>199.3</b>	<b>162.4</b>	<b>36.9</b>	<b>199.3</b>

(a) See footnote (a) to table on page 708. (b) See footnote (b) to table on page 708. (c) Includes a small number of miners, quarrymen, etc.

\* Less than 4,000. See footnote \* to table on page 708.

PERSONS WITH MORE THAN ONE JOB(a): PROPORTION OF THE LABOUR FORCE,  
AUSTRALIA, MAY 1971  
(Per cent)

	Males	Females	Persons
Capital cities(b) . . . . .	3.8	2.0	3.2
Other areas . . . . .	5.1	2.2	4.3
New South Wales . . . . .	4.1	2.0	3.4
Victoria . . . . .	3.8	1.4	3.0
Queensland . . . . .	4.0	2.4	3.5
South Australia . . . . .	5.8	*	4.5
Western Australia . . . . .	4.9	3.8	4.6
Tasmania . . . . .	6.5	*	5.2
Married . . . . .	4.9	1.8	4.0
Single(c) . . . . .	2.8	2.5	2.7
Birthplace—			
Australia . . . . .	4.9	2.2	4.0
United Kingdom and Ireland . . . . .	3.4	2.4	3.0
Other Countries . . . . .	2.7	1.2	2.2
Age—			
15-24 years . . . . .	3.8	2.2	3.1
25-34 years . . . . .	6.4	2.2	5.2
35-44 years . . . . .	5.4	2.1	4.4
45-54 years . . . . .	3.3	1.8	2.9
55 years and over . . . . .	2.0	*	1.8
Industry of main job—			
Primary production . . . . .	3.9	*	3.6
Manufacturing . . . . .	3.8	1.2	3.2
Commerce . . . . .	4.7	2.1	3.6
Public authority (n.e.i.) and community and business services . . . . .	5.6	2.7	4.0
Other industries . . . . .	4.3	2.1	3.7
Occupation in main job—			
Professional and technical . . . . .	6.5	2.9	5.0
Administrative, executive, managerial and clerical . . . . .	4.5	2.7	3.6
Sales . . . . .	6.8	*	3.9
Farmers, fishermen, timber getters, etc. . . . .	4.0	*	3.7
Transport and communication . . . . .	4.5	*	4.3
Craftsmen, production-process workers, etc.(d) . . . . .	3.6	*	3.2
Service, sport and recreation . . . . .	4.1	1.9	2.7
<b>Total . . . . .</b>	<b>4.4</b>	<b>2.1</b>	<b>3.6</b>

(a) See footnote (a) to table on page 708. (b) Statistical Divisions of the six State capital cities. (c) Never married, widowed and divorced. (d) Includes a small number of miners, quarrymen, etc.

\* Less than 4,000. See footnote \* to table on page 708.

## EMPLOYED WAGE AND SALARY EARNERS

Estimates of wage and salary earners in this issue are based on data derived from the 1966 population census. Because of the adoption of a new definition of the labour force in the 1966 census these estimates are not comparable with those for periods before June 1966.

Detailed industry figures for each State and Australia, on the new basis, and a revised government employment series, have been published in two mimeographed bulletins entitled *Employed Wage and Salary Earners* (Reference No. 6.23), covering the period June 1966 to June 1971. These bulletins contained estimates for each month of the period covered. Estimates for current months are published in *Employment and Unemployment*.

Particulars of the questions asked in the 1966 census in order to determine each person's labour force status are given on pages 691-2. Provided he had not been temporarily laid off by his employer without pay for the whole of the week prior to the census, a person who answered 'yes' to either of the first two of those questions was classified as employed.

The data needed to derive the estimates for periods subsequent to the benchmark date (June 1966) are obtained from three main sources, namely, (a) current pay-roll tax returns; (b) current returns from government bodies; and (c) some other current returns of employment (e.g. for hospitals); the balance, i.e. unrecorded private employment, is estimated. Month-to-month changes shown by current returns are linked to the benchmark data to derive the monthly estimates. At June 1966, recorded employment obtained from the foregoing sources accounted for about 85 per cent of the total number of employees in the industries covered, as determined by the census.

The figures in this section generally relate only to civilian wage and salary earners, not the total labour force. They therefore exclude employers, self-employed persons and unpaid helpers. Also excluded, because of the inadequacy of current data, are employees in agriculture and private domestic service, and some part-time employees. Defence forces are included in the table on page 712.

The June 1966 figures were derived from particulars recorded for individuals on population census schedules, while the estimated monthly changes are derived mainly from reports supplied by employers, relating to enterprises or establishments. Because the two sources differ in some cases in the reporting of industry, the industry dissection of the census totals has been adjusted to conform as closely as possible to an establishment reporting basis. For this reason, and because crews of overseas ships were excluded from the benchmark figures, the estimates for June 1966 in this chapter differ from those published in the series of census bulletins (Nos. 1.6, 2.6, etc.) which show particulars of the occupational status and industry of the population in each State and Territory, and in other publications which contain population census results. The industry classification used throughout the series is that of the population census of June 1966.

Current data supplied by reporting enterprises or establishments generally refer to persons on the pay-roll for the last pay-period in each month. Persons who are on paid leave or who work during part of the pay-period and are unemployed or on strike during the rest of the period are generally counted as employed. Those not shown on employers' pay-rolls because they are on leave without pay, on strike or stood down for the entire period are excluded.

Prior to 1 September 1971, pay-roll tax returns were lodged by all employers paying more than \$400 a week in wages (other than certain Commonwealth Government bodies, religious and benevolent institutions, public hospitals and other similar organisations specifically exempted under the *Pay-roll Tax Assessment Act 1941-1969*). Since that date, when the authority for collection of pay-roll tax passed from the Commonwealth to the States, State and local government bodies not engaged in business activity have generally been exempted.

Particulars of employment obtained from other collections, such as the annual manufacturing census and censuses and sample surveys of retail establishments, are used to check and where desirable to revise estimates in relevant sections. Some figures are subject to further revision as the results of later censuses and surveys become available.

Although the series measure reasonably well the short-term trends in employment in the defined field, they may be less reliable for longer-term measurement. There are conceptual differences between benchmark and pay-roll data, and changes in such factors as labour turnover, multiple jobholding and part-time working all affect the trend over longer periods.

NOTE. At the June 1971 population census, trainee teachers (enrolled at government teachers colleges and in some cases enrolled also at other institutions) were for the first time classified as not in the labour force. The employment estimates for that month include approximately 7,000 male and 17,000 female trainees. For subsequent periods trainee teachers have been excluded from the estimates.

#### Total civilian employees and defence forces

#### WAGE AND SALARY EARNERS IN EMPLOYMENT, BY SEX: AUSTRALIA JUNE 1968 TO JUNE 1972

EXCLUDING EMPLOYEES IN AGRICULTURE AND PRIVATE DOMESTIC SERVICE

('000)

	June 1968	June 1969	June 1970	June 1971	June 1972
MALES					
Civilian employees—					
Private . . . . .	1,945.1	2,014.9	2,084.3	2,142.9	2,135.0
Government(a)(b) . . . . .	780.2	790.0	803.3	818.0	837.7
Total(b) . . . . .	2,725.3	2,804.9	2,887.6	2,960.9	2,972.7
Defence forces(c) . . . . .	78.1	80.8	81.5	80.5	78.3
Total(b) . . . . .	2,803.4	2,885.7	2,969.1	3,041.4	3,051.0
FEMALES					
Civilian employees—					
Private . . . . .	1,064.6	1,110.7	1,177.4	1,225.8	1,248.7
Government(a)(b) . . . . .	239.9	256.1	275.4	291.1	286.0
Total(b) . . . . .	1,304.5	1,366.8	1,452.8	1,516.9	1,534.7
Defence forces(c) . . . . .	2.7	2.7	2.7	2.7	2.8
Total(b) . . . . .	1,307.2	1,369.5	1,455.5	1,519.6	1,537.5
PERSONS					
Civilian employees—					
Private . . . . .	3,009.8	3,125.6	3,261.7	3,368.7	3,383.7
Government(a)(b) . . . . .	1,020.0	1,046.1	1,078.7	1,109.1	1,123.7
Total(b) . . . . .	4,029.8	4,171.7	4,340.4	4,477.8	4,507.4
Defence forces(c) . . . . .	80.8	83.5	84.2	83.2	81.1
Total(b) . . . . .	4,110.6	4,255.2	4,424.6	4,561.0	4,588.5

(a) Includes employees, within Australia, of government authorities (Commonwealth, State, local, and semi-government) on services such as railways, road transport, banks, post office, air transport, education (including universities), broadcasting, television, police, public works, factories, departmental hospitals and institutions, migrant hostels, etc., as well as administrative employees. See pages 714-5. (b) From July 1971 the estimates exclude trainee teachers, some of whom were classified as wage and salary earners for earlier periods. See NOTE above. (c) Permanent defence forces in Australia and overseas. Includes national servicemen enlisted in the Regular Army Supplement.



## Civilian employees

WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT  
BY INDUSTRY GROUP AND SEX: AUSTRALIA, JUNE 1968 TO JUNE 1972EXCLUDING DEFENCE FORCES AND EMPLOYEES IN AGRICULTURE AND PRIVATE DOMESTIC SERVICE  
(<sup>'000</sup>)

Industry Group	June 1968	June 1969	June 1970	June 1971	June 1972
MALES					
Mining and quarrying . . . .	55.2	59.5	65.2	69.4	69.8
Manufacturing . . . . .	980.1	1,002.5	1,020.6	1,034.5	1,021.0
Electricity, gas, water and sanitary services . . . . .	103.2	104.3	105.2	106.7	108.2
Building and construction . . . .	336.1	344.3	351.3	361.4	365.8
Transport and storage . . . . .	208.2	211.9	218.3	222.8	220.5
Communication . . . . .	86.3	87.7	90.4	92.2	93.8
Finance and property . . . . .	106.5	112.5	118.6	123.2	124.7
Retail trade . . . . .	200.2	204.0	209.9	214.7	221.1
Wholesale and other commerce . . .	197.9	203.4	208.0	209.7	209.5
Public authority activities (n.e.i.) .	121.4	126.8	132.1	137.8	142.7
Health, hospitals, etc. . . . .	41.4	43.0	44.6	47.1	49.9
Education(a) . . . . .	88.2	92.8	96.9	103.3	101.7
Amusement, hotels, cafes, personal service, etc. . . . .	95.0	101.7	108.4	114.7	119.4
Other(b) . . . . .	105.6	110.6	118.1	123.9	124.6
<i>Total(a)</i> . . . . .	<i>2,725.3</i>	<i>2,804.9</i>	<i>2,887.6</i>	<i>2,960.9</i>	<i>2,972.7</i>
FEMALES					
Mining and quarrying . . . . .	2.8	3.3	4.2	4.8	4.7
Manufacturing . . . . .	329.9	342.1	355.9	357.4	348.0
Electricity, gas, water and sanitary services . . . . .	7.5	7.9	8.2	8.5	8.5
Building and construction . . . .	13.4	14.6	16.0	17.6	18.2
Transport and storage . . . . .	24.0	25.2	27.1	28.4	28.3
Communication . . . . .	24.9	25.4	26.5	27.4	28.0
Finance and property . . . . .	78.6	83.1	90.2	94.0	94.5
Retail trade . . . . .	214.5	219.7	229.1	235.5	246.8
Wholesale and other commerce . . .	76.6	79.8	83.9	86.7	86.2
Public authority activities (n.e.i.) .	52.0	55.4	60.2	63.2	66.8
Health, hospitals, etc. . . . .	156.7	165.6	177.5	191.0	207.1
Education(a) . . . . .	119.9	128.7	137.8	148.3	139.2
Amusement, hotels, cafes, personal service, etc. . . . .	133.7	140.3	153.3	165.0	167.8
Other(b) . . . . .	70.0	75.9	83.0	88.9	90.9
<i>Total(a)</i> . . . . .	<i>1,304.5</i>	<i>1,366.8</i>	<i>1,452.8</i>	<i>1,516.9</i>	<i>1,534.7</i>
PERSONS					
Mining and quarrying . . . . .	58.0	62.8	69.4	74.2	74.5
Manufacturing . . . . .	1,310.0	1,344.6	1,376.5	1,392.0	1,369.0
Electricity, gas, water and sanitary services . . . . .	110.7	112.1	113.4	115.1	116.6
Building and construction . . . .	349.5	358.9	367.3	379.0	384.0
Transport and storage . . . . .	232.2	237.1	245.4	251.2	248.8
Communication . . . . .	111.2	113.0	117.0	119.6	121.8
Finance and property . . . . .	185.1	195.6	208.8	217.3	219.2
Retail trade . . . . .	414.7	423.7	438.9	450.2	467.9
Wholesale and other commerce . . .	274.6	283.2	291.9	296.4	295.6
Public authority activities (n.e.i.) .	173.4	182.1	192.3	201.0	209.4
Health, hospitals, etc. . . . .	198.1	208.6	222.1	238.1	257.0
Education(a) . . . . .	208.1	221.5	234.7	251.7	240.9
Amusement, hotels, cafes, personal service, etc. . . . .	228.6	241.9	261.7	279.7	287.1
Other(b) . . . . .	175.6	186.5	201.1	212.7	215.5
<i>Total(a)</i> . . . . .	<i>4,029.8</i>	<i>4,171.7</i>	<i>4,340.4</i>	<i>4,477.8</i>	<i>4,507.4</i>

(a) From July 1971 the estimates exclude trainee teachers, some of whom were classified as wage and salary earners for earlier periods. See NOTE on page 712. (b) Comprises forestry, fishing and trapping; law, order and public safety; religion and social welfare; and other community and business services.

# WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT, BY SEX STATES AND TERRITORIES, JUNE 1968 TO JUNE 1972

EXCLUDING DEFENCE FORCES AND EMPLOYEES IN AGRICULTURE AND PRIVATE DOMESTIC SERVICE  
(<sup>'000</sup>)

June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T. (a)	Aust.
MALES									
1968 . .	1,025.4	763.5	354.6	254.0	197.0	84.7	15.6	30.5	2,725.3
1969 . .	1,052.2	782.2	366.6	261.6	206.4	86.5	17.2	32.2	2,804.9
1970 . .	1,083.1	801.0	377.5	266.6	216.5	88.5	19.3	35.1	2,887.6
1971 . .	1,108.3	812.7	390.8	271.7	229.1	89.1	21.2	38.1	2,960.9
1972(b)	1,103.5	821.7	401.1	271.1	224.2	89.4	21.0	40.7	2,972.7
FEMALES									
1968 . .	497.2	388.2	154.0	116.2	89.3	37.1	6.4	16.1	1,304.5
1969 . .	518.4	405.8	160.7	121.4	97.3	38.1	7.2	18.1	1,366.8
1970 . .	550.0	426.1	171.4	129.9	107.5	39.3	8.1	20.6	1,452.8
1971 . .	572.0	440.0	182.3	136.3	114.8	40.5	8.7	22.4	1,516.9
1972(b)	573.2	445.0	187.6	137.6	118.0	40.2	9.7	23.4	1,534.7
PERSONS									
1968 . .	1,522.6	1,151.7	508.6	370.2	286.3	121.8	22.0	46.6	4,029.8
1969 . .	1,570.6	1,188.0	527.3	383.0	303.7	124.6	24.4	50.3	4,171.7
1970 . .	1,633.1	1,227.1	548.9	396.5	324.0	127.8	27.4	55.7	4,340.4
1971 . .	1,680.3	1,252.7	573.1	408.0	343.9	129.6	29.9	60.5	4,477.8
1972(b)	1,676.7	1,266.7	588.7	408.7	342.2	129.6	30.7	64.1	4,507.4

(a) Includes persons employed in the Australian Capital Territory who reside in adjoining areas. (b) From July 1971 the estimates exclude trainee teachers, some of whom were classified as wage and salary earners for earlier periods. See NOTE on page 712.

## Government employees

The numbers of civilian employees of Commonwealth, State and local government authorities in each State and Territory at June 1972 are shown in the following table. These include employees within Australia of government authorities on services such as railways, road transport, banks, post office, air transport, education (including universities), broadcasting, television, police, public works, factories, departmental hospitals and institutions, migrant hostels, etc., as well as administrative employees.

# CIVILIAN EMPLOYEES OF GOVERNMENT AUTHORITIES, BY SEX STATES AND TERRITORIES, JUNE 1972 (<sup>'000</sup>)

State or Territory	Commonwealth Government(a)			State Government(a)(b)			Local Government			Total(a)(b)		
	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons
New South Wales . .	82.5	29.5	112.0	165.9	66.9	232.7	49.8	6.2	56.0	298.1	102.6	400.7
Victoria . .	69.6	22.5	92.2	122.7	41.6	164.3	18.8	3.7	22.5	211.1	67.8	279.0
Queensland . .	26.0	8.5	34.5	73.9	22.7	96.6	18.6	1.7	20.4	118.5	32.9	151.5
South Australia . .	23.0	6.2	29.2	50.9	24.1	75.1	5.6	0.9	6.5	79.5	31.2	110.7
Western Australia . .	15.0	5.3	20.3	50.2	18.7	69.0	6.5	1.1	7.6	71.7	25.1	96.8
Tasmania . .	5.3	1.7	7.0	18.6	6.3	24.9	3.0	0.4	3.3	26.9	8.4	35.3
Northern Territory . .	7.4	3.6	11.0	..	..	..	0.1	..	0.2	7.6	3.6	11.1
Australian Capital Territory . .	24.3	14.4	38.6	..	..	..	..	..	..	24.3	14.4	38.6
Australia . .	253.0	91.8	344.8	482.3	180.4	662.6	102.4	13.9	116.3	837.7	286.0	1,123.7

(a) Includes semi-government authorities. See explanation above. (b) Excludes trainee teachers, some of whom were classified as wage and salary earners for earlier periods. See NOTE on page 712.

CIVILIAN EMPLOYEES OF GOVERNMENT AUTHORITIES, BY SEX: AUSTRALIA  
JUNE 1968 TO JUNE 1972

('000)

June—	Commonwealth Government(a)			State Government(a)(b)			Local Government			Total(a)(b)		
	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons
1968 . . . . .	230.7	74.7	305.4	457.5	153.4	610.9	92.1	11.7	103.8	780.2	239.9	1,020.0
1969 . . . . .	236.2	79.4	315.7	463.2	164.2	627.5	90.6	12.4	103.0	790.0	256.1	1,046.1
1970 . . . . .	243.9	85.5	329.4	467.3	177.1	644.4	92.1	12.8	104.8	803.3	275.4	1,078.7
1971 . . . . .	249.5	88.9	338.3	476.7	188.7	665.4	91.9	13.4	105.4	818.0	291.1	1,109.1
1972 . . . . .	253.0	91.8	344.8	482.3	180.4	662.6	102.4	13.9	116.3	837.7	286.0	1,123.7

(a) Includes semi-government authorities. See explanation on page 714. (b) From July 1971 the estimates exclude trainee teachers, some of whom were classified as wage and salary earners for earlier periods. See NOTE on page 712.

## COMMONWEALTH EMPLOYMENT SERVICE

Statutory warrant for the Commonwealth Employment Service (C.E.S.) is to be found in the *Re-establishment and Employment Act* 1945–1966 (sections 47 and 48). In brief, the main functions of the C.E.S. are to assist people seeking employment to obtain positions best suited to their training, experience, and qualifications; and to assist employers seeking labour to obtain employees best suited to their needs. The organisation and functions of the C.E.S. conform to the provisions of the Employment Service Convention, 1948, of the International Labour Organisation, which was ratified by Australia in December 1949. In addition, C.E.S. practices accord substantially with the provisions of the I.L.O. Employment Service Recommendation, 1948.

The C.E.S. functions on a decentralised basis within the Employment and Training Division of the Department of Labour and National Service. The Central Office is in Melbourne and there is a Regional Office in the capital city of each State. There are 160 District Employment Offices and Branch Offices in suburban and the larger provincial centres and 329 agents in the smaller country centres. The District Employment Offices and Branch Offices are distributed as follows: New South Wales, 56; Victoria, 39; Queensland, 26; South Australia, 15; Western Australia, 16; Tasmania, 5; Northern Territory, 2; Australian Capital Territory, 1.

Specialised facilities are provided for young people, persons with physical and mental handicaps, ex-members of the defence forces, national service dischargees, migrants, rural workers, and persons with professional and technical qualifications. The C.E.S. provides vocational guidance free of charge in all States and has a staff of qualified psychologists for this function. Guidance is available to any person, but is provided particularly for young people, ex-servicemen and the handicapped. In New South Wales the C.E.S. provides vocational guidance to adults, including ex-servicemen and the handicapped, while the State Department of Labour and Industry provides a vocational guidance service within the school system and for young persons leaving school.

All applicants for unemployment benefits under the *Social Services Act* 1947–1972 must register at a District Office or agency of the C.E.S., which is responsible for certifying whether or not suitable employment can be offered to them. The C.E.S. is responsible for placing in employment migrant workers sponsored by the Commonwealth under the Commonwealth Nomination and similar schemes. This includes arranging for them to move to their initial employment and for their admission, if necessary, to Commonwealth migrant hostels. Assistance in obtaining employment is provided to other migrants as required. Since 1951 it has been responsible for recruiting Australian experts for overseas service under the Colombo Plan and the United Nations Expanded Programme of Technical Assistance (now replaced by the U.N. Development Programme). The principal spheres in which experts have been supplied are agriculture, education, engineering, geology, health, and economic and scientific research and development.

In association with placement activities, regular surveys of the labour market are carried out and detailed information is supplied to interested Commonwealth and State Government departments and instrumentalities and to the public. Employers, employees and other interested persons are advised on labour availability and employment opportunities in various occupations and areas and on other matters concerning employment.

The Service completed its twenty-sixth year of operation in May 1972. During 1971 there were 1,272,281 applicants who registered for employment, of whom 887,172 were referred to employers and 489,946 placed in employment. New vacancies notified numbered 703,791.

**Persons registered for employment**

The following table shows the number of persons who claimed, when registering for employment with the Commonwealth Employment Service, that they were not employed and who were recorded as unplaced. The figures include those persons who were referred to employers and those who may have obtained employment without notifying the C.E.S. They include persons in receipt of unemployment benefit (*see* the chapter Welfare Services).

**PERSONS REGISTERED FOR EMPLOYMENT WITH COMMONWEALTH  
EMPLOYMENT SERVICE: STATES, JUNE 1968 TO JUNE 1972**

(Source: Department of Labour and National Service)

<i>June(a)</i>	<i>N.S.W.(b)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(c)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
1968 . . . .	20,808	19,595	10,252	8,359	4,151	2,088	65,253
1969 . . . .	18,277	13,254	10,908	6,300	4,007	2,120	54,866
1970 . . . .	16,527	13,008	8,585	6,360	5,147	1,888	51,515
1971 . . . .	21,609	17,878	9,412	7,975	6,683	2,682	66,239
1972 . . . .	34,176	25,430	11,693	12,328	12,076	3,498	99,201

(a) Generally at Friday nearest end of month.

(b) Includes Australian Capital Territory.

(c) Includes Northern Territory.

**Job vacancies**

The following table shows the number of vacancies registered with the Commonwealth Employment Service. The figures refer to vacancies which employers claimed were available immediately or would be available by the end of the following calendar month.

**VACANCIES REGISTERED WITH COMMONWEALTH EMPLOYMENT SERVICE  
STATES, JUNE 1968 TO JUNE 1972**

(Source: Department of Labour and National Service)

<i>June(a)</i>	<i>N.S.W.(b)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(c)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
1968 . . . .	11,416	9,411	2,605	1,591	2,630	1,069	28,722
1969 . . . .	14,053	11,777	2,057	2,561	3,786	762	34,996
1970 . . . .	17,674	12,326	3,240	2,495	3,206	924	39,865
1971 . . . .	13,623	9,228	3,305	2,596	2,340	679	31,771
1972 . . . .	8,695	8,411	3,024	2,093	1,564	699	24,486

(a) Generally at Friday nearest end of month.

(b) Includes Australian Capital Territory.

(c) Includes Northern Territory.



## CHAPTER 21

# MANUFACTURING INDUSTRY

### Introduction

An historical summary of the development of the manufacturing industry in Australia since 1901 is contained in earlier issues of the Year Book (*see* No. 51, pages 143–4).

#### Decentralisation and manufacturing industries

The decentralisation of secondary industries, and the steps taken by Commonwealth and State Governments towards its development, are referred to in previous issues of the Year Book (*see* No. 51, page 144).

#### Bounties on manufacture

Bounties are paid by the Commonwealth Government to encourage local manufacture of certain products. The statutory provisions usually fix a term of operation of the bounty, provide for payment at a rate varying according to changes in the corresponding customs duty, specify the annual maximum amount of bounty payable, and require the bounty to be withheld or reduced if a manufacturer's net profit in production of the commodity exceeds a certain rate, or if rates of wages and conditions of employment in production of the commodity do not conform to prescribed standards. (*See* Chapter 18, Public Finance for products on which bounties are paid.)

#### Standardisation

*The Commonwealth Scientific and Industrial Research Organization* has functions concerned with the improvement of efficiency in industrial operations. For further particulars *see* the chapter Education, Cultural Activities, and Research of this Year Book.

*The Standards Association of Australia* is the organisation responsible for industrial standardisation on a national basis. It issues Australian standards for materials and products and standard codes of practice.

Formed as the Australian Commonwealth Engineering Standards Association in 1922, it was reconstituted as the Standards Association of Australia in 1929, and was incorporated by Royal Charter in 1950. It is an independent body having the full recognition and support of the Commonwealth and State Governments and of industry. Approximately half its funds are provided by Commonwealth Government grant, the remainder coming primarily from membership subscriptions and from sale of publications. Organisations, companies, and individuals are eligible for subscribing membership.

The Association is controlled by a Council comprising representatives from Commonwealth and State Governments and their departments, from associations of manufacturing and commercial interests, and from professional institutions. Standards are prepared by committees composed of expert representatives from the interests associated with the subjects under consideration. This assistance is on a voluntary basis.

Preparation of standards is undertaken in response to requests from industrial associations or firms or from government departments. Standards may relate to one or more of several aspects of industrial practice such as terminology, test methods, dimensions, specifications of performance and quality of products, and safety or design codes. In general, standards derive authority from voluntary adoption based on their intrinsic merit, but in special cases where safety of life or property is involved, they may have compulsory application through statutory reference.

The Association is the owner of a registered certification trade mark covering conformity of products to standards. Manufacturers of products covered by Australian standards may obtain a licence to use the Australian Standard Mark, under conditions established by the Association.

The Association has international affiliations and is a member, representing Australia, of the International Organization for Standardization (ISO) and of the International Electrotechnical Commission (IEC). Close links are maintained with overseas standards organisations, and the Association acts as Australian agent for the procurement of ISO and IEC publications and the standards of other countries.

The Association has two specialised libraries, one in Sydney and one in Melbourne, containing the national standards of all countries with standards organisations. These libraries provide necessary material for committee work and a free information service to those concerned with standards.

The headquarters office of the Association is in Sydney, and there is a major branch office in Melbourne. Branch offices are located also in other capital cities and at Newcastle, New South Wales.

*The National Association of Testing Authorities* organises testing facilities throughout Australia to serve private and governmental needs.

Membership is open to authorities whose testing laboratories conform to the standards of staffing and operation defined by the Association. Testing authorities may register their laboratories voluntarily. The Association assesses the competence of the laboratories and ensures that their standards of competence are maintained. Certificates of test issued by registered laboratories may be endorsed in the name of the Association. NATA endorsed test certificates are generally accepted by governmental, industrial and commercial interests.

Laboratories are registered for performance of specific tests in the fields of metrology, mechanical testing, electrical testing, optics and photometry, non-destructive testing, heat and temperature measurement, chemical testing, biological testing, and acoustic and vibration measurement. In June 1972 893 laboratories held NATA registration. A further 33 laboratories had been nominated for registration.

*The Industrial Design Council of Australia* was established in June 1958 for the purpose of encouraging better design in Australian-made goods and fostering an appreciation of good design throughout the community. The Council is fully representative of industry, commerce and government, together with designers and educationists. Its activities are financed by donations from industry and commerce, and by Commonwealth and State grants. IDCA has established Australian design centres in Adelaide, Melbourne and Sydney. These centres display Australian products of approved design and present changing exhibitions relating to design in manufactured articles. IDCA is also responsible for the Australian Design Index which provides a detailed, illustrated record of well-designed Australian products.

The Design Delegate scheme enables regular contact to be maintained with senior executives of manufacturing companies, departmental officers and designers wishing to participate actively in IDCA's programme of lectures, information, and guidance on all aspects of industrial design. Services to design delegates are administered by IDCA through its design centres.

A Record of Designers has been set up to register information about industrial designers and their work. The Council, which has its headquarters in Melbourne, is also concerned with raising the standard of training in industrial design in co-operation with education authorities. For further particulars see Year Book No. 51, page 145.

#### **Overseas participation in Australian manufacturing industry**

For further particulars, see Year Book No. 51, pages 143-4.

### **Manufacturing industry statistics**

#### **Manufacturing industry statistics from 1901 to 1967-68**

A series of substantially uniform statistics exist from 1901 up until 1967-68 when the framework within which manufacturing statistics were collected was changed. The following table contains a summary of statistics on manufacturing activities in Australia over that period. More detailed manufacturing statistics in respect of this period have been included in previous editions of the Year Book.

## MANUFACTURING INDUSTRY: AUSTRALIA(a), 1901 TO 1967-68

Year	Factories	Employment(b)	Salaries and wages paid(c)	Value of—				
				Materials and fuel used	Output	Production (d)	Land and Buildings (e)	Plant and Machinery (e)
	No.	'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
1901	11,143	198	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1911	14,455	312	55,056	163,526	266,044	102,518	65,402	63,032
1920-21	17,113	367	125,864	427,118	647,986	220,868	121,662	137,310
1930-31	21,751	339	124,910	344,978	581,598	236,620	224,422	248,996
1940-41	27,300	650	275,838	773,762	1,289,590	515,828	288,188	322,712
1950-51	43,147	969	983,436	2,613,926	4,301,670	1,687,744	605,570	673,230
1960-61	57,782	1,145	2,289,230	6,115,930	10,465,765	4,349,835	2,389,140	2,785,565
1963-64	59,375	1,210	2,651,620	7,372,682	12,642,686	5,270,003	3,204,685	3,480,673
1964-65	61,042	1,269	2,993,709	8,140,600	14,037,355	5,896,754	3,505,859	3,766,253
1965-66	61,686	1,294	3,162,769	8,437,958	14,689,819	6,251,861	3,776,590	4,154,652
1966-67	62,500	1,309	3,407,683	9,015,844	15,892,845	6,877,001	4,061,193	4,706,843
1967-68	62,954	1,331	3,665,902	9,663,217	17,094,070	7,430,853	4,303,156	4,962,203

(a) Before 1 July 1964, excludes Northern Territory and Australian Capital Territory. (b) 1901 and 1911—average employment during period of operation. Later years relate to average employment over whole year. Working proprietors are included in all years. (c) Excludes amounts drawn by working proprietors. (d) Value added in process of manufacture (i.e. value of output less value of materials and fuel, etc. used). (e) Depreciated or book values at 30 June. Includes estimated values of rented premises and machinery.

## Manufacturing industry statistics from 1968-69

As from the year ended June 1969, the Censuses of Manufacturing, Electricity and Gas have been conducted within the framework of the integrated economic censuses which include the Censuses of Mining, Retail Trade and Selected Services, and Wholesale Trade. As a result manufacturing industry statistics for 1968-69 and subsequent years are not directly comparable with previous years. The electricity and gas industries, which were previously included in the Annual Factory Census, were the subject of separate censuses, details of which are given on page 726. The integration of these economic censuses was designed to increase substantially the usefulness and comparability of economic statistics collected and published by the Bureau and to form a basis for the sample surveys which supply current economic statistics from quarter to quarter, particularly those which provide data for the quarterly national income and expenditure estimates.

The economic censuses of Manufacturing, Mining and Retail Trade previously conducted in Australia were originally designed and subsequently developed primarily to provide statistics for particular industries on a basis which would best suit the requirements of users interested in statistics of those industries. More recently there has been a growth of interest in statistics describing activity in the economy as a whole—reflected, for example, in the development of employment and earnings statistics, surveys of capital expenditure and stocks and the whole field of national accounts statistics. For such purposes statistics derived from economic censuses in the past have had serious limitations despite the fact that they covered a broad area of the whole economy. Because of the special-purpose nature of each of the censuses, there were no common definitions of data, there was no common system of reporting units, and, as a standard industrial classification was not used for these censuses, industry boundaries were not defined in ways which would avoid overlapping or gaps occurring between the industrial sectors covered. For these reasons, direct aggregation and comparison of statistics from different censuses were not possible.

The integration of these economic censuses meant that for the first time they were being collected on the basis of a common framework of reporting units and data concepts and in accordance with a standard industrial classification. As a result, the statistics for the industries covered by the censuses are now provided with no overlapping or gaps in scope, and in such a way that aggregates for certain important economic data such as value added, employment, wages and salaries, fixed capital expenditure and stocks can be obtained on a consistent basis for all sectors of the economy covered by the censuses.



For the integration of the various censuses it was necessary to undertake three major developments:

- (a) The census units for which the statistics were to be collected (factories, mines, shops, etc.) had to be defined and identified in consistent ways and recorded in a central register, together with identifying data about the businesses owning and operating them.
- (b) A standard industrial classification had to be adopted so that the census units could be classified in consistent ways and to enable the boundaries of the various economic censuses to be determined without gaps or overlapping between them.
- (c) In order to bring the items of data to a consistent basis of definition in all censuses, it was necessary to revise all the forms used in previous censuses.

The standardisation of census units in the integration of economic censuses means that the basic census unit (the establishment), in general, now covers all the operations carried on under the one ownership at a single physical location. The manufacturing establishment is thus one predominantly engaged in manufacturing but the data supplied for it now cover (with a few exceptions) all activities at the location. Previously, the manufacturing establishment covered only a specified manufacturing activity primary to one class of industry. It now covers, in addition, subject to certain exceptions mentioned below:

- (a) Any other manufacturing activity (i.e. production of goods primary to another class of industry).
- (b) Any selling and distribution activities connected with the products manufactured.
- (c) Any non-manufacturing activity (e.g. merchandising of goods not manufactured by the establishment; extraction of raw materials for use by the establishment).

The exceptions in general relate to locations where the subsidiary activities (in terms of gross value) exceed \$1 million, which are treated for statistical purposes as two or more establishments corresponding to the various kinds of activity carried on.

The establishment statistics also include data relating to separately located administrative offices and ancillary units serving the establishment and forming part of the business (enterprise) which owns and operates the establishment. These units were formerly excluded from the manufacturing census. They are units such as head offices, storage premises and manufacturers' sales branches or sales offices (except those of the kind which distribute to customers from stocks held by such branches or offices, which are treated as establishments in the Wholesale Census).

The Australian Standard Industrial Classification (ASIC), described in the Bureau publication *Australian Standard Industrial Classification (Preliminary Edition)*, 1969, Vol. 1, defines the industries in the economy for statistical purposes, thus permitting the scope of the different economic censuses to be specified without gaps or overlapping between them. It also sets out standard rules for identifying the statistical units (e.g. establishments) and for coding them to the industries of the classification. This classification is broadly convertible to the International Standard Industrial Classification adopted by the United Nations Statistical Commission. The adoption of the ASIC has resulted in changes in scope between the integrated economic censuses introduced in 1968-69 and the individual economic censuses conducted in previous years. The main changes in scope in the manufacturing census, apart from providing for a separate census for electricity and gas, are as follows:

- (a) Establishments mainly engaged in the following activities, previously included in manufacturing censuses, are excluded as from 1968-69: motor vehicle repairs but not engine reconditioning; repair and servicing of agricultural machinery; dry-cleaning, laundering and clothes dyeing services; watch, clock and jewellery repairing; boot and shoe repairing; tyre retreading and repairing; custom dressmaking and tailoring (including clothing repair and alterations); installing and repairing of blinds and awnings, making up and installing of curtains; and repair of domestic appliances. Establishments mainly engaged in these activities are now included in the periodic Retail Trade or Wholesale Trade Censuses.
- (b) Establishments mainly engaged in non-manufacturing activities but which also carry out, as a subsidiary activity, some manufacturing activities, and which in respect of those manufacturing activities, were previously included in the manufacturing census are excluded as from 1968-69 unless such establishments have manufacturing activities of a gross value of \$1 million or more.
- (c) Establishments mainly engaged in the following activities, previously excluded in most States from manufacturing censuses, are included as from 1968-69: slaughtering, milk treatment, and publishing.

An indication of the effect of the changes referred to above can be gained from the following comparison. In the 1967-68 census there were approximately 62,600 manufacturing establishments



(excluding electricity and gas establishments), with employment of 1,276,000. Of these, approximately 35,400, with employment of 1,097,000 (but *see* footnote (b) to the following table) would have been included in the 1967-68 census if ASIC had been used. Figures for the individual States and Territories are given below.

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Approximate number of manufacturing establishments—									
1967-68 census	24,900	18,000	6,100	6,200	5,300	1,800	180	240	62,600
1967-68 census if ASIC had been used(a)	13,800	11,400	3,500	3,000	2,500	960	70	100	35,400
Approximate number of employees (thousands)—									
1967-68 census	512	433	114	116	63	34	5		1,276
1967-68 census if ASIC had been used(b)	445	376	95	100	51	27	3		1,097

(a) Excludes the establishments referred to in (c), in the paragraph above. (b) These figures relate to employment as defined for the 1967-68 and previous year censuses. They thus exclude employment at the establishments referred to in (c) in the paragraph above, sales and distribution employees, employees connected with non-manufacturing activities and employees at separately located administrative offices and ancillary units serving manufacturing establishments. The figures, therefore, are not directly comparable with those for 1968-69 and 1969-70, which include the aforementioned employees.

The third step in integrating the censuses, whereby the items of data on the census forms were standardised for all census sectors, has meant changes in the content of the statistics. For example, the value of 'turnover' is now collected instead of the value of output at the factory, and purchases and selected expenses are collected as well as the value of specified materials, fuels, etc., used. However the underlying concept of 'value added', is similar to the former concept 'value of production', even though its method of derivation is different. Value added, the basic measure of the establishment's contribution to total production, is now calculated as turnover less purchases and transfers in (from other establishments of the enterprise), plus increase (or less decrease) in stocks. In the past the corresponding item, value of production, was obtained by deducting the value of materials, fuels, etc., used from the value of output at the factory. A detailed comparison of the method of derivation is shown in the following table.

<i>Value of production 1967-68</i>	<i>Value added as from 1968-69</i>
Selling value at works, exclusive of all delivery costs or charges, of goods manufactured, treated or worked up during the year, including by-products, plus	Sales, and transfers out (to other establishments of the enterprise), of goods manufactured by the establishment, plus
Value of other work done, . . . such as repairing and making up for customers, etc.	Sales and transfers out of goods not manufactured by the establishment, plus
	Bounties and subsidies on production, plus
	All other operating income, plus
	Capital work done for own use, or for rental or lease
<i>Equals: Value of output</i>	<i>Equals: Value of turnover</i>
	Plus: Closing stocks
	Less: Opening stocks
<i>Less—</i>	<i>Less—</i>
Value of materials used	Purchases and transfers in of materials, electricity, fuels, containers, etc.
Power, fuel and light used	Purchases and transfers in of goods for resale
Water used	Charges for commission and subcontract work
Lubricating oils used	Repair and maintenance expenses
Repairs, etc.	Outward freight and cartage, motor vehicle running expenses, sales commission payments
Containers used	
<i>Equals: Value of production</i>	<i>Equals: Value added</i>

Even though the concept of value added is similar to value of production, direct comparison of 1968-69 and previous figures will not be possible because of the change in census units already mentioned which has resulted in the value added for the whole establishment being reported, not merely the value added for the manufacturing process. Comparison is also affected, of course, by the change in the scope of the manufacturing census due to the adoption of ASIC.

For a more detailed description of the Integrated Economic Censuses reference should be made to Chapter 31, Year Book No. 56.

## Summary of operations

The following table shows the summary of operations for manufacturing establishments.

**MANUFACTURING ESTABLISHMENTS—SUMMARY OF OPERATIONS, BY INDUSTRY  
SUB-DIVISION: AUSTRALIA, 1968-69 AND 1969-70**

Industry sub-division	ASIC code (a)	Number of establishments operating during year	Persons employed(b)			Wages and salaries \$m	Turn-over \$m	Stocks at 30 June		Purchases, transfers in and selected expenses \$m	Value added \$m	Fixed capital expenditure(c) \$m
			Males No.	Females No.	Total No.			opening \$m	closing \$m			
1968-69												
Food, beverages and tobacco	21-2	5,043	138,856	48,994	187,850	548	4,011	497	532	2,864	1,182	132
Textiles	23	913	32,751	26,740	59,491	162	743	157	163	448	301	30
Clothing and footwear	24	3,547	27,776	95,667	123,443	264	933	149	161	536	409	19
Wood, wood products and furniture	25	6,190	72,862	9,700	82,562	220	891	125	133	503	395	25
Paper and paper products, printing	26	3,391	74,716	28,392	103,108	332	1,235	164	174	624	621	84
Chemical, petroleum and coal products	27	1,236	47,533	17,009	64,542	230	1,518	290	288	883	633	113
Non-metallic mineral products	28	1,835	47,900	4,999	52,899	178	747	98	107	389	367	59
Basic metal products	29	663	84,900	5,159	90,059	338	2,151	363	399	1,460	727	175
Fabricated metal products	31	4,961	95,856	21,131	116,987	354	1,363	237	251	756	621	53
Transport equipment	32	1,532	133,913	14,089	148,002	479	1,991	362	381	1,175	835	90
Other machinery and equipment	33	4,786	145,212	47,874	193,086	608	2,231	523	582	1,271	1,019	81
Miscellaneous manufacturing	34	2,793	45,135	23,009	68,144	196	832	137	150	482	363	43
Total manufacturing.		36,890	947,410	342,763	1,290,173	3,908	18,646	3,102	3,320	11,390	7,473	903
1969-70												
Food, beverages and tobacco	21-2	4,911	142,679	51,143	193,822	616	4,438	533	573	3,162	1,317	149
Textiles	23	902	33,269	26,591	59,860	170	769	158	166	465	311	41
Clothing and footwear	24	3,488	27,060	95,924	122,984	286	1,009	161	176	571	453	20
Wood, wood products and furniture	25	6,148	73,082	10,352	83,434	239	973	132	137	546	433	27
Paper and paper products, printing	26	3,523	77,179	29,511	106,690	367	1,388	174	198	713	699	86
Chemical, petroleum, and coal products	27	1,236	48,471	17,825	66,296	257	1,600	292	307	922	692	132
Non-metallic mineral products	28	1,858	47,964	5,249	53,213	200	834	106	117	439	406	67
Basic metal products	29	651	87,800	5,531	93,331	368	2,559	404	445	1,757	843	238
Fabricated metal products	31	5,080	99,135	22,589	121,724	404	1,516	253	277	866	675	55
Transport equipment	32	1,549	134,415	15,713	150,128	539	2,197	380	416	1,324	909	104
Other machinery and equipment	33	4,809	147,229	50,048	197,277	669	2,489	586	649	1,427	1,125	82
Miscellaneous manufacturing	34	2,862	45,935	23,843	69,778	220	929	150	168	547	400	41
Total manufacturing.		37,017	964,218	354,319	1,318,537	4,335	20,702	3,328	3,629	12,739	8,264	1,041

(a) Australian Standard Industrial Classification.

(b) At end of June. Includes working proprietors.

(c) Outlay on fixed tangible assets less disposals.

## Employment

The statistics on the number of persons employed shown in the following table relates to working proprietors at end of June 1970 and employees on the payroll of the last pay period in June 1970, including those working at separately located administrative offices and ancillary units in the State.

It should be noted that persons employed in each State (and their wages and salaries) relate to those employed at establishments, administrative offices or ancillary units located in that State, even though the administrative offices or ancillary units may have served establishments located in another State.

**MANUFACTURING ESTABLISHMENTS—MALES, FEMALES AND PERSONS EMPLOYED  
BY INDUSTRY SUB-DIVISION: STATES AND TERRITORIES, 1968-69 AND 1969-70**

Industry sub-division		ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
MALES EMPLOYED											
Food, beverages and tobacco	21-2	47,414	42,460	26,998	11,515	8,879	4,641	417	355	142,679	
Textiles	23	11,167	17,125	998	1,639	598	1,729	(b)	(b)	33,269	
Clothing and footwear	24	8,863	15,167	1,449	1,113	352	116	..	..	27,060	
Wood, wood products and furniture	25	25,409	17,534	11,206	6,911	7,320	4,439	31	232	73,082	
Paper and paper products, printing	26	29,724	25,216	6,926	5,275	4,176	4,771	96	995	77,179	
Chemical, petroleum and coal products	27	21,477	17,032	2,710	2,883	2,944	1,399	(b)	(b)	48,471	
Non-metallic mineral products	28	20,501	12,310	5,407	3,539	4,753	961	186	307	47,964	
Basic metal products	29	55,738	10,486	3,752	9,630	4,174	4,001	(b)	(b)	87,800	
Fabricated metal products	31	38,781	32,319	9,582	8,941	7,604	1,462	93	353	99,135	
Transport equipment	32	42,480	49,469	11,427	25,295	4,586	1,060	(b)	(b)	134,415	
Other machinery and equipment	33	66,218	51,649	7,464	15,419	5,546	816	12	105	147,229	
Miscellaneous manufacturing	34	18,605	19,730	2,768	3,313	1,293	201	(b)	(b)	45,935	
Total manufacturing	1969-70	386,377	310,497	90,687	95,473	52,225	25,596	947	2,416	964,218	
	1968-69	380,471	303,437	90,905	93,328	50,901	25,346	861	2,161	947,410	
FEMALES EMPLOYED											
Food, beverages and tobacco	21-2	17,173	15,924	7,055	4,604	3,928	2,258	89	112	51,143	
Textiles	23	9,115	12,252	1,311	1,377	360	2,170	(b)	(b)	26,591	
Clothing and footwear	24	35,938	49,367	5,673	3,076	1,617	253	..	..	95,924	
Wood, wood products and furniture	25	3,651	2,624	1,659	1,025	1,064	306	3	20	10,352	
Paper and paper products, printing	26	12,460	9,543	2,608	1,882	1,526	1,051	36	405	29,511	
Chemical, petroleum and coal products	27	9,811	6,286	599	634	413	80	(b)	(b)	17,825	
Non-metallic mineral products	28	2,132	1,826	289	375	523	78	8	18	5,249	
Basic metal products	29	3,086	1,163	250	632	258	141	(b)	(b)	5,531	
Fabricated metal products	31	10,210	7,532	1,519	1,888	1,120	261	12	47	22,589	
Transport equipment	32	4,880	8,232	550	1,688	188	170	(b)	(b)	15,713	
Other machinery and equipment	33	26,358	16,136	994	5,565	815	139	1	40	50,048	
Miscellaneous manufacturing	34	11,005	9,696	886	1,665	563	23	(b)	(b)	23,843	
Total manufacturing	1969-70	145,819	140,581	23,393	24,411	12,375	6,930	154	656	354,319	
	1968-69	140,898	136,994	22,785	22,986	11,622	6,743	151	584	342,763	
PERSONS EMPLOYED											
Food, beverages and tobacco	21-2	64,587	58,384	34,053	16,119	12,807	6,899	506	467	193,822	
Textiles	23	20,282	29,377	2,309	3,016	958	3,899	(b)	(b)	59,860	
Clothing and footwear	24	44,801	64,534	7,122	4,189	1,969	369	..	..	122,984	
Wood, wood products and furniture	25	29,060	20,158	12,865	7,936	8,384	4,745	34	252	83,434	
Paper and paper products, printing	26	42,184	34,759	9,534	7,157	5,702	5,822	132	1,400	106,690	
Chemical, petroleum and coal products	27	31,288	23,318	3,309	3,517	3,357	1,479	(b)	(b)	66,296	
Non-metallic mineral products	28	22,633	14,136	5,696	3,914	5,276	1,039	194	325	53,213	
Basic metal products	29	58,824	11,649	4,002	10,262	4,432	4,142	(b)	(b)	93,331	
Fabricated metal products	31	48,991	39,851	11,101	10,829	8,724	1,723	105	400	121,724	
Transport equipment	32	47,360	57,701	11,977	26,983	4,774	1,230	(b)	(b)	150,128	
Other machinery and equipment	33	92,576	67,785	8,458	20,984	6,361	955	13	145	197,277	
Miscellaneous manufacturing	34	29,610	29,426	3,654	4,978	1,856	224	(b)	(b)	69,778	
Total manufacturing	1969-70	532,196	451,078	114,080	119,884	64,600	32,526	1,101	3,072	1,318,537	
	1968-69	521,369	440,431	113,690	116,314	62,523	32,089	1,012	2,745	1,290,173	

(a) Australian Standard Industrial Classification.

(b) Not available for publication.



**Wages and salaries**

The following table shows wages and salaries of all employees of manufacturing establishments including those working at separately located administrative offices and ancillary units in the State. Drawings of working proprietors are not included.

**MANUFACTURING ESTABLISHMENTS—WAGES AND SALARIES BY  
INDUSTRY SUB-DIVISION: STATES AND TERRITORIES, 1968-69 AND 1969-70**  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Food, beverages and tobacco	21-2	208	200	96	47	40	20	1	2	616
Textiles	23	59	86	5	9	2	9	(b)	(b)	170
Clothing and footwear	24	102	157	13	9	4	1	..	..	286
Wood, wood products and furniture	25	87	60	33	21	23	13	..	1	239
Paper and paper products, printing	26	147	123	29	23	19	21	1	5	367
Chemical, petroleum and coal products	27	124	90	12	13	14	6	(b)	(b)	257
Non-metallic mineral products	28	86	54	20	15	19	4	1	1	200
Basic metal products	29	232	48	16	39	17	17	(b)	(b)	368
Fabricated metal products	31	166	137	33	33	28	5	..	2	404
Transport equipment	32	170	215	39	96	15	4	(b)	(b)	539
Other machinery and equipment	33	317	235	26	66	21	3	..	1	669
Miscellaneous manufacturing	34	94	97	9	15	4	..	(b)	(b)	220
<b>Total manufacturing</b>	<b>1969-70</b>	<b>1,791</b>	<b>1,501</b>	<b>332</b>	<b>385</b>	<b>208</b>	<b>102</b>	<b>4</b>	<b>11</b>	<b>4,335</b>
	<b>1968-69</b>	<b>1,618</b>	<b>1,342</b>	<b>309</b>	<b>348</b>	<b>182</b>	<b>95</b>	<b>4</b>	<b>9</b>	<b>3,908</b>

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

**Turnover**

The following table shows the value of turnover of manufacturing establishments. The figures include sales of goods whether produced by the establishment or not, transfers out of goods to other establishments of the same enterprise, bounties and subsidies on production, plus all other operating revenue from outside the enterprise, such as commission, repair and service revenue and the value of capital work done on own account. Rents, leasing revenue, interest (other than hire purchase), royalties and receipts from the sale of fixed tangible assets are excluded.

**MANUFACTURING ESTABLISHMENTS—TURNOVER, BY INDUSTRY SUB-DIVISION  
STATES AND TERRITORIES, 1968-69 AND 1969-70**  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Food, beverages and tobacco	21-2	1,342	1,598	781	313	252	135	10	8	4,438
Textiles	23	264	393	24	42	10	35	(b)	(b)	769
Clothing and footwear	24	369	565	38	26	9	2	..	..	1,009
Wood, wood products and furniture	25	354	242	127	97	93	57	..	3	973
Paper and paper products, printing	26	554	472	108	91	62	90	1	10	1,388
Chemical, petroleum and coal products	27	792	470	140	73	93	30	(b)	(b)	1,600
Non-metallic mineral products	28	333	222	89	68	90	18	4	9	834
Basic metal products	29	1,487	275	264	256	138	139	(b)	(b)	2,559
Fabricated metal products	31	608	505	135	125	115	22	2	4	1,516
Transport equipment	32	606	945	177	388	71	10	(b)	(b)	2,197
Other machinery and equipment	33	1,185	887	105	227	76	8	..	1	2,489
Miscellaneous manufacturing	34	385	424	45	55	15	1	(b)	(b)	929
<b>Total manufacturing</b>	<b>1969-70</b>	<b>8,279</b>	<b>6,998</b>	<b>2,034</b>	<b>1,761</b>	<b>1,028</b>	<b>546</b>	<b>19</b>	<b>37</b>	<b>20,702</b>
	<b>1968-69</b>	<b>7,399</b>	<b>6,336</b>	<b>1,869</b>	<b>1,584</b>	<b>920</b>	<b>487</b>	<b>20</b>	<b>31</b>	<b>18,646</b>

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

**Purchases, transfers in and selected expenses**

The following table gives details of the value of purchases, transfers in and selected expenses. Figures include purchases of materials, fuel, power, containers, etc., plus transfers in of goods from other establishments of the enterprise, plus charges for commission and sub-contract work, repair and maintenance expenses, outward freight and cartage, motor vehicle running expenses and sales commission payments.



**MANUFACTURING ESTABLISHMENTS—PURCHASES, TRANSFERS IN AND SELECTED EXPENSES, BY INDUSTRY SUB-DIVISION: STATES AND TERRITORIES, 1968-69 AND 1969-70**  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Food, beverages and tobacco	21-2	929	1,176	566	216	174	89	7	5	3,162
Textiles	23	160	237	15	29	6	18	(b)	(b)	465
Clothing and footwear	24	212	322	19	13	4	1	..	..	571
Wood, wood products and furniture	25	201	137	69	56	48	32	..	2	546
Paper and paper products, printing	26	285	249	54	42	29	50	..	3	713
Chemical, petroleum and coal products	27	445	266	95	43	55	17	(b)	(b)	922
Non-metallic mineral products	28	176	119	45	36	46	8	3	6	439
Basic metal products	29	1,004	197	201	182	93	79	(b)	(b)	1,757
Fabricated metal products	31	347	288	78	71	66	13	1	2	866
Transport equipment	32	345	573	114	240	47	4	(b)	(b)	1,324
Other machinery and equipment	33	686	505	61	124	46	4	..	..	1,427
Miscellaneous manufacturing	34	224	253	27	31	8	1	(b)	(b)	547
Total manufacturing	1969-70	5,013	4,322	1,346	1,083	626	317	12	19	12,739
	1968-69	4,440	3,860	1,225	970	564	302	11	17	11,390

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

**Stocks**

Statistics on the value of opening and closing stocks at 30 June are shown in the following table. Figures include all the stocks of materials, fuels, etc., and finished goods and work-in-progress of the establishment whether located at the establishment or elsewhere.

**MANUFACTURING ESTABLISHMENTS—OPENING AND CLOSING STOCKS 1968-69 AND 1969-70, BY INDUSTRY SUB-DIVISION: STATES AND TERRITORIES**  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>OPENING STOCKS AT 1 JULY 1969</b>										
Food, beverages and tobacco	21-2	171	209	61	50	19	21	1	..	533
Textiles	23	57	76	4	8	2	11	(b)	(b)	158
Clothing and footwear	24	59	89	8	4	1	..	..	..	161
Wood, wood products and furniture	25	41	32	17	15	14	13	..	..	132
Paper and paper products, printing	26	65	63	14	9	7	13	..	2	174
Chemical, petroleum and coal products	27	143	92	20	12	19	6	(b)	(b)	292
Non-metallic mineral products	28	49	26	11	8	8	2	..	..	106
Basic metal products	29	217	40	45	53	23	25	(b)	(b)	404
Fabricated metal products	31	101	90	22	19	16	4	..	1	253
Transport equipment	32	106	174	23	66	7	2	(b)	(b)	380
Other machinery and equipment	33	267	233	21	48	16	1	..	..	586
Miscellaneous manufacturing	34	60	72	7	8	2	..	(b)	(b)	150
Total manufacturing	.	1,336	1,197	255	301	135	99	2	4	3,328
<b>CLOSING STOCKS AT 30 JUNE 1970</b>										
Food, beverages and tobacco	21-2	183	225	65	56	20	23	2	..	573
Textiles	23	58	80	5	9	2	11	(b)	(b)	166
Clothing and footwear	24	65	96	8	5	1	..	..	..	176
Wood, wood products and furniture	25	44	33	18	14	14	13	..	..	137
Paper and paper products, printing	26	75	73	17	10	8	14	..	2	198
Chemical, petroleum and coal products	27	150	99	21	12	19	6	(b)	(b)	307
Non-metallic mineral products	28	53	28	13	9	11	2	..	..	117
Basic metal products	29	226	42	66	59	29	23	(b)	(b)	445
Fabricated metal products	31	110	99	22	24	18	4	..	1	277
Transport equipment	32	122	180	26	75	10	3	(b)	(b)	416
Other machinery and equipment	33	296	261	20	53	18	2	..	..	649
Miscellaneous manufacturing	34	68	78	9	9	3	..	(b)	(b)	168
Total manufacturing	.	1,448	1,293	290	336	153	101	3	3	3,629
<b>Opening and Closing Stocks 1968-69</b>										
Opening stocks 1 July 1968		1,244	1,128	237	274	120	95	2	3	3,102
Closing stocks 30 June 1969		1,323	1,195	254	302	133	105	2	4	3,320

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

**Value added**

The statistics on value added contained in the following table have been calculated by adding to the value of turnover the increase (or deducting the decrease) in the value of stocks, and deducting the value of purchases, transfers in and selected expenses. A more detailed description of the method of deriving value added is given on page 721.

**MANUFACTURING ESTABLISHMENTS—VALUE ADDED, BY INDUSTRY SUB-DIVISION  
STATES AND TERRITORIES, 1968-69 AND 1969-70**  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Food, beverages and tobacco	21-2	425	438	218	104	78	47	4	3	1,317
Textiles	23	105	161	9	15	5	17	(b)	(b)	311
Clothing and footwear	24	164	250	19	13	5	1	..	..	453
Wood, wood products and furniture	25	156	106	59	41	45	25	..	2	433
Paper and paper products, printing	26	278	233	57	49	34	41	1	6	699
Chemical, petroleum and coal products	27	354	210	46	30	38	13	(b)	(b)	692
Non-metallic mineral products	28	161	105	46	33	47	10	3	3	406
Basic metal products	29	493	79	84	79	52	57	(b)	(b)	843
Fabricated metal products	31	269	226	58	59	50	9	1	2	675
Transport equipment	32	276	378	66	157	26	6	(b)	(b)	909
Other machinery and equipment	33	528	409	43	109	32	4	..	..	1,125
Miscellaneous manufacturing	34	169	177	20	25	8	1	(b)	(b)	400
<b>Total manufacturing</b>	<b>1969-70</b>	<b>3,378</b>	<b>2,773</b>	<b>724</b>	<b>714</b>	<b>419</b>	<b>231</b>	<b>8</b>	<b>17</b>	<b>8,264</b>
	<b>1968-69</b>	<b>3,041</b>	<b>2,541</b>	<b>660</b>	<b>643</b>	<b>368</b>	<b>195</b>	<b>10</b>	<b>15</b>	<b>7,473</b>

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

**Number of establishments**

The following table shows the number of establishments, in each State, which operated during the year 1969-70. These figures relate to manufacturing establishments as such and do not include the numbers of separately located administrative offices and ancillary units.

**MANUFACTURING ESTABLISHMENTS—NUMBER OF ESTABLISHMENTS OPERATING  
DURING 1968-69 AND 1969-70 BY INDUSTRY SUB-DIVISION: STATES AND TERRITORIES**

Industry sub-division	ASIC code	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Food, beverages and tobacco	21-2	1,466	1,361	878	508	468	196	22	12	4,911
Textiles	23	357	383	56	50	35	20	(a)	(a)	902
Clothing and footwear	24	1,377	1,728	178	117	75	13	..	..	3,488
Wood, wood products and furniture	25	2,022	1,558	968	539	607	417	5	32	6,148
Paper and paper products, printing	26	1,476	1,209	299	251	199	60	4	25	3,523
Chemical, petroleum and coal products	27	586	376	84	91	78	17	(a)	(a)	1,236
Non-metallic mineral products	28	686	462	225	186	218	52	16	13	1,858
Basic metal products	29	254	215	65	68	33	15	(a)	(a)	651
Fabricated metal products	31	1,973	1,557	521	457	449	88	15	20	5,080
Transport equipment	32	554	455	179	182	150	26	(a)	(a)	1,549
Other machinery and equipment	33	2,137	1,594	308	414	285	60	3	8	4,809
Miscellaneous manufacturing	34	1,172	1,019	216	240	190	24	(a)	(a)	2,862
<b>Total manufacturing</b>	<b>1969-70</b>	<b>14,060</b>	<b>11,917</b>	<b>3,977</b>	<b>3,103</b>	<b>2,787</b>	<b>988</b>	<b>69</b>	<b>116</b>	<b>37,017</b>
	<b>1968-69</b>	<b>13,975</b>	<b>11,829</b>	<b>4,103</b>	<b>3,085</b>	<b>2,713</b>	<b>997</b>	<b>73</b>	<b>115</b>	<b>36,890</b>

(a) Not available for publication.

**Electricity and gas establishments**

As mentioned on page 719, the electricity and gas industries, which were previously included in the Annual Factory Census, have been the subject of separate censuses as from 1968-69. In addition the electricity and gas census has been extended to cover distribution as well as production. The following tables show statistics for each State and Territory, and for Australia for the years 1968-69 and 1969-70.

For electricity and gas, the basic census unit is an exception to the general concept of the standardised unit. Because of the nature of the activities of electricity and gas undertakings, the single operating location basis is not suitable. The establishment unit used consists of all locations, including administrative offices and ancillary units, mainly concerned with the production and/or distribution of electricity or gas, operated by the undertaking in the one State. The use of this concept

is one of the reasons for the number of electricity and gas establishments since 1968-69 being considerably less than in previous years. The other main reason is that until 1967-68, a number of electricity generating stations operated by enterprises principally for their own use were included. However, as from 1968-69, these generating stations have been included in the electricity census only if sales and transfers of electricity exceeded \$100,000 in value.

**ELECTRICITY AND GAS ESTABLISHMENTS(a), SUMMARY OF OPERATIONS  
STATES AND TERRITORIES, 1968-69 AND 1969-70**

State or Territory	Number of establishments operating during year	Persons employed(b)			Wages and salaries (\$m)	Turnover (c) (\$m)	Stocks at 30 June		Purchases, transfers in and selected expenses (\$m)	Value added (\$m)	Fixed capital expenditure(d) (\$m)
		Males (No.)	Females (No.)	Total (No.)			Opening (\$m)	Closing (\$m)			
1968-69											
New South Wales—											
Electricity . . .	51	23,942	2,334	26,276	107	532	41	45	255	282	157
Gas . . . . .	34	2,991	493	3,484	13	44	3	3	18	26	5
Victoria—											
Electricity . . .	15	13,784	1,339	15,123	62	273	21	21	90	183	107
Gas . . . . .	8	3,804	556	4,360	17	54	5	6	15	40	21
Queensland—											
Electricity . . .	23	6,971	438	7,409	27	149	10	11	60	90	57
Gas . . . . .	7	648	118	766	2	9	1	1	3	6	1
South Australia—											
Electricity . . .	19	5,631	204	5,835	21	84	6	7	30	54	22
Gas . . . . .											
Western Australia—											
Electricity . . .	59	3,447	264	3,711	13	51	5	6	15	37	28
Gas . . . . .											
Tasmania—											
Electricity . . .	5	2,432	194	2,626	11	35	5	5	1	33	4
Gas . . . . .											
Northern Territory—											
Electricity . . .	5										
Gas . . . . .											
Australian Capital Territory—		(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)
Electricity . . .	1										
Gas . . . . .											
Australia—											
Electricity . . .	171	55,476	4,690	60,166	238	1,123	87	94	453	677	374
Gas . . . . .	56	8,873	1,309	10,182	37	123	10	11	42	82	30
1969-70											
New South Wales—											
Electricity . . .	51	23,628	2,358	25,986	113	580	45	47	274	308	165
Gas . . . . .	34	2,769	502	3,271	12	44	3	3	18	27	2
Victoria—											
Electricity . . .	14	13,558	1,311	14,869	64	289	21	23	94	197	96
Gas . . . . .	8	3,447	574	4,021	19	57	6	5	17	39	20
Queensland—											
Electricity . . .	21	7,337	566	7,903	29	158	11	11	63	94	52
Gas . . . . .	7	592	115	707	2	10	1	1	4	6	1
South Australia—											
Electricity . . .	17	5,576	185	5,761	23	91	7	6	26	64	25
Gas . . . . .											
Western Australia—											
Electricity . . .	57	3,598	291	3,889	15	62	6	7	18	44	39
Gas . . . . .											
Tasmania—											
Electricity . . .	6	2,552	202	2,754	12	39	5	5	1	39	2
Gas . . . . .											
Northern Territory—											
Electricity . . .	6										
Gas . . . . .											
Australian Capital Territory—		(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)
Electricity . . .	1										
Gas . . . . .											
Australia—											
Electricity . . .	167	55,330	4,865	60,195	252	1,213	94	99	477	740	383
Gas . . . . .	55	8,338	1,312	9,650	39	129	11	10	44	84	26

(a) Covers production and distribution. (b) At end of June. Includes working proprietors. (c) In some States electricity is produced by certain undertakings and sold to other undertakings for distribution. In these States sales of electricity are duplicated due to the inclusion of the bulk sales to these distributors. (d) Outlay on fixed tangible assets less disposals. (e) Not available for publication. Included in total for Australia.

## Principal factory products

The factory production of certain commodities is shown in the monthly and quarterly publications of this Bureau, in the series *Manufacturing Industries*, and in the bulletin *Manufacturing Commodities*, formerly *Secondary Industries, Part II.—Materials Used and Articles Produced in Factories*.

The following table shows the total recorded production of some of the principal articles (i.e. of those for which production can be represented in quantitative terms) manufactured in Australia. A more complete list, where available, is published in the aforementioned bulletin and in the mimeographed statement *Principal Manufacturing Commodities*.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING  
ESTABLISHMENTS: AUSTRALIA 1966-67 TO 1969-70

Commodity code	Article	1966-67 (a)	1967-68 (a)	1968-69	1969-70 <sup>p</sup>
	Acid (in terms of 100%)—				
401.29	Hydrochloric . . . . .	tons	n.a.	35,320	35,483
401.37	Nitric . . . . .	"	31,009	35,033	124,725
401.57	Sulphuric . . . . .	'000 tons	1,991	1,892	1,752
171.03, 05	Aerated and carbonated waters . . . . .	'000 gal	112,937	126,933	142,556
	Air-conditioning equipment—				
657.03, 05	Room air conditioners (refrigerated) . . . . .	No.	22,217	30,509	39,266
657.13, 15	Room air coolers (evaporative coolers) . . . . .	"	10,414	18,363	(b)
657.21, 22, 23	Package unit air conditioners . . . . .	"	3,491	4,654	7,202
475.04, 06, 07, 85	Asbestos cement building sheets (finished) . . . . .	'000 sq yd	32,609	36,251	42,120
	Bags, leather, fibre, etc.—				
	Handbags—				
864.31	Leather . . . . .	No.	501,762	492,736	448,197
864.33	Plastic . . . . .	'000	1,938	2,294	2,442
864.39	Other . . . . .	No.	392,798	396,281	491,402
946.01-52	Hessian and calico bags . . . . .	'000 doz	3,808	3,973	3,697
864.11-19	Suitcases, kitbags and trunks . . . . .	'000	1,551	1,592	(b)
864.41-49	All other(c) . . . . .	"	2,057	1,988	2,002
	Bath heaters—				
652.01	Electric . . . . .	No.	11,701	11,777	10,055
652.03, 04	Gas . . . . .	"	9,026	8,468	7,629
652.05	Solid fuel . . . . .	"	12,446	11,820	5,584
779.02-55	Bathing suits . . . . .	doz	301,723	299,825	5,033
	Baths—				
671.01	C.I.P.E. . . . .	No.	74,489	74,527	326,326
671.03-08	Other . . . . .	"	79,987	87,419	159,994
	Batteries, wet cell type—				
685.13, 15	Auto (S.L.I.) 6 volts . . . . .	'000	481	465	420
685.17, 19	Auto (S.L.I.) 12 volts . . . . .	"	1,488	1,653	1,824
685.33, 35	Radio, homelighter, fencer . . . . .	No. of 2 volt cells	117,445	106,525	76,357
685.43-65	Traction, plant and other . . . . .	"	99,537	70,518	136,341
172.02, 04, 06	Beer (excluding waste beer) . . . . .	'000 gal	293,714	309,775	341,205
064.21	Biscuits . . . . .	'000 lb	230,118	233,383	243,387
372.52-66	Blankets . . . . .	'000	1,725	1,654	1,699
	Boots and shoes (see Footwear)				
152.02	Bran (wheaten) . . . . .	tons (2,000 lb)	202,183	195,862	184,004
172.21	Brandy . . . . .	'000 proof gal	791	872	1,096
777.41, 49	Brassieres . . . . .	doz	792,015	815,130	765,065
064.03-13	Bread (2 lb loaf equivalent) . . . . .	'000	802,936	805,679	840,543
066.01-31	Breakfast food, cereal (ready to eat) . . . . .	cwt	900,231	935,523	967,728
472.01, 03	Bricks, clay . . . . .	million	1,361	1,440	992,837
261.41	Briquettes, brown coal . . . . .	'000 tons	1,820	1,745	1,697
051.31	Butter . . . . .	'000 lb	489,217	432,313	1,539
	Cardigans, sweaters, etc. . . . .	'000 doz	1,436	1,378	494,206
773.51, 71, 81	Cement, Portland . . . . .	'000 tons	3,661	3,805	1,410
474.02	Cheese (green weight) . . . . .	'000 lb	153,834	155,385	4,439
051.36-46	Cigarettes and cigars . . . . .	"	50,384	51,517	168,219
183.02, 11	Cloth (including mixtures)—				(f)65,500
373.10-52	Cotton(d) . . . . .	'000 sq yd	57,573	59,043	56,715
374.02-16	Rayon and acetate . . . . .	"	35,692	37,226	57,075
374.20-34	Synthetic (non-cellulosic) . . . . .	"	23,530	27,904	36,199
372.02-50	Wool . . . . .	"	30,635	32,599	32,193
	Coke—				
435.22	Metallurgical . . . . .	'000 tons	3,365	3,678	32,036
435.12	Other . . . . .	tons	551,326	507,253	3,994
475.90	Concrete, ready mixed . . . . .	'000 cu yd	7,000	7,955	
	Confectionery—				
104.02-18	Chocolate . . . . .	'000 lb	104,934	98,984	108,506
104.21-29	Other . . . . .	"	111,796	112,848	102,788
452.04	Copper, refined(e) . . . . .	tons	74,313	72,166	123,315
	Coppers (wash boilers)—				
653.31	Electric . . . . .	No.	8,011	9,462	6,935
653.33, 34	Gas . . . . .	"	4,949	6,464	5,195
653.51	Inserts . . . . .	"	9,047	(b)	7,203

(a) Excludes Northern Territory and Australian Capital Territory. (b) Not available for publication.  
(c) Excludes canvas water bags. (d) Excludes tyre-cord fabric. (e) Primary origin only. (f) Includes tobacco.



QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING  
ESTABLISHMENTS: AUSTRALIA, 1966-67 TO 1969-70—continued

Commodity code	Article		1966-67 (a)	1967-68 (a)	1968-69	1969-70p
171.06, 10 777.01-29 611.01	Cordials and syrups . . . . . Corsets and corselets . . . . . Cycles (complete) . . . . .	'000 gal doz No.	9,160 393,231 69,365	9,776 418,145 90,671	10,459 367,287 98,971	10,974 343,547 127,385
804.01	Dentifrices (toothpaste) . . . . .	'000 lb	10,773	10,324	11,424	
503.06 503.08 499.42, 44 523.76-78 502.22-39	Electric generators— Non-automotive—Alternating current . . . Direct current . . . Electricity . . . Electrodes for manual welding . . . Engines, internal combustion(c) . . . Essences, flavouring—	No. " " mil. kWh '000 lb '000 "	1,763 708 41,484 45,705 288	2,111 632 44,531 45,180 258	3,013 438 48,901 48,833 293	
139.31 139.35	Domestic . . . . . Industrial . . . . .	gal "	100,460 733,289	90,861 840,894	104,407 856,007	
802.11, 12 696.01, 03, 05 045.01, 51	Face powder . . . . . Fans, electric . . . . . Fish, canned (including fish loaf) . . . Floorboards—	lb No. '000 lb	376,236 321,600 13,713	298,233 360,346 17,403	353,396 426,080 14,880	
332.06 332.08	Australian timber . . . . . Imported timber . . . . .	'000 super ft "	154,286 324	151,812 463	164,991 579	
841.01-07 841.31-41, 841.54-68 841.85 692.22	Floor coverings— Textile . . . . . Smooth surface . . . . . Underfelts, underlays, etc. . . . . Floor polishers, electric . . . . .	'000 sq yd " " No.	12,624 12,150 (d)14,802 88,840	12,758 14,524 (d)16,613 72,657	16,170 13,496 (d)18,485 53,382	18,343 14,574 (d)20,273 52,988
068.01 062.01, 10, 32	Flour— Self-raising . . . . . Wheaten(e) . . . . .	'000 cwt '000 tons (2,000 lb)	832 1,392	804 1,419	837 1,398	
791	Footwear (not rubber)— Boots, shoes and sandals . . . . . Slippers . . . . .	'000 pairs "	37,080 4,454	38,076 4,298	38,391 3,972	38,014 3,818
074.61-79 074.76, 82, 89	Fruit juices, natural— Single strength . . . . . Concentrated(f) . . . . .	'000 gal "	9,798 1,236	8,779 1,047	12,967 1,794	
434.09	Gas (town) . . . . .	mil. cubic ft	56,743	58,070	(g)62,214	
781.01, 03	Gloves— Dress . . . . . Work—	doz pairs	27,761	30,913	25,604	(b)
781.06, 07, 31 781.11-29 127.21 832.58, 59	Sewn(h) . . . . . Dipped . . . . . Glucose . . . . . Golf clubs . . . . .	'000 doz pairs " '000 lb doz	358 1,343 65,422 40,680	371 1,539 61,945 38,082	2,556 69,258 39,006	2,324 72,769 41,914
786.01 786.11	Handkerchiefs— Men's . . . . . Women's . . . . .	'000 doz "	1,664 1,371	1,971 1,205	1,910 1,314	
651.01, 03 651.11-17 651.21, 22, 26, 27	Heaters, room— Solid fuel . . . . . Radiators and electric fires . . . . . Gas fires and space heaters, domestic . . .	No. " "	31,606 600,294 38,764	24,558 623,950 38,268	23,104 803,475 58,457	16,094 714,172 49,855
281.04 051.61 051.87, 89	Ice . . . . . Ice cream . . . . . Infants' and invalids' milk-based health beverages(i) . . . . .	tons '000 gal '000 lb	190,274 34,974 49,348	187,306 37,423 48,234	139,791 38,737 54,448	
419.31 419.43-59	Ink, printing— News . . . . . Other . . . . .	" " "	16,190 14,782	17,401 15,440	18,751 (b)	
442.04, 08 442.10-19 442.28 693.51, 61, 63	Iron and steel— Pig iron . . . . . Steel ingots, open hearth and electric . . . Blooms and slabs . . . . . Irons, electric (hand, domestic) . . . . .	'000 tons " " No.	4,893 6,114 4,978 507,882	5,209 6,287 5,372 465,501	5,722 (j)6,599 (k)5,749 550,916	5,983 6,874 5,894 581,347
076.60	Jams (including conserves, jellies, etc.) . . .	'000 lb	90,761	83,917	92,150	80,116
391.04	Lard . . . . .	"	6,670	6,475	10,956	
699.52, 53 699.41, 45, 55, 61 453.04	Lawn mowers— Petrol, rotary . . . . . Other types(l). . . . . Lead refined(m). . . . .	No. " tons	219,826 11,235 192,429	184,908 11,688 186,908	208,562 19,115 175,664	270,749 21,150 185,366

(a) Excludes Northern Territory and Australian Capital Territory. (b) Not available for publication. (c) Petrol and diesel. Excludes car, motor cycle, truck, tractor, aero, and marine engines. (d) New basis—Needled (or bonded) felts of jute or jute/hair mixtures (for all purposes) as from July 1966. (e) Includes wheatmeal for baking and sharps and other flour. (f) Excludes grape must. (g) Includes natural gas. (h) Excludes fabric liners for dipped gloves but includes moulded or heat sealed work gloves. (i) Includes malted milk and milk sugar (lactose). (j) Including semi-permanent mould castings, investment casting and diecasting of iron and steel. (k) Year ended 31 May. (l) Petrol cylinder, electric and hand. (m) Includes lead content of lead only from primary sources, but excludes lead-silver bullion produced for export.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING  
ESTABLISHMENTS: AUSTRALIA, 1966-67 TO 1969-70—continued

Commodity code	Article		1966-67 (a)	1967-68 (a)	1968-69	1969-70p
	Leather—					
	Dressed or finished—					
301.43-65	Chrome tanned (including retanned) . . .	'000 sq ft	71,953	72,214	74,617	
301.31-37, 83-89	Vegetable tanned, by weight . . .	'000 lb	12,883	11,296	10,573	
301.67, 69	Vegetable tanned, by measurement . . .	'000 sq ft	4,009	3,303	3,174	
311.08, 14, 18	Tanned or dressed skins with hair or wool retained . . .	doz	82,018	110,381	115,143	
	Lime—					
275.43, 45	Crushed . . .	tons	249,807	253,755	181,513	
479.18	Hydrated . . .	"	97,544	95,539	(b)	
479.12	Quick . . .	"	155,173	179,536	(b)	
802.21	Lipstick . . .	lb	74,842	72,323	116,734	
063.11-31	Malt (excluding extract) . . .	'000 bushel	14,239	13,776	14,103	14,428
	Margarine—					
121.01	Table . . .	'000 lb	48,356	35,576	34,393	36,709
121.06, 08	Other . . .	"	76,138	89,285	97,032	89,815
	Mattresses and bed bases—					
844.01	Box spring . . .	No.	100,362	118,883	143,874	167,128
844.21	Inner spring . . .	"	682,587	659,452	656,922	716,634
844.11	Woven wire, link mesh and spring . . .	"	638,726	626,534	722,629	674,937
844.41, 51, 61	Other . . .	"	302,882	304,533	291,361	318,207
027.02-76	Meat, canned(c) . . .	'000 lb	100,849	106,957	96,338	103,252
	Meters—					
702.01	Electric (domestic)(d) . . .	No.	296,571	304,905	295,999	315,249
703.01	Gas . . .	"	37,834	37,831	60,893	64,434
703.11	Water . . .	"	146,915	148,839	143,912	174,537
	Milk, condensed, concentrated and evaporated—					
051.21, 22	Full cream, sweetened . . .	'000 lb	61,510	47,316	40,439	36,551
051.24, 25, 26, 27	Full cream, unsweetened . . .	"	91,700	87,946	98,658	120,893
051.28	Skim . . .	"	24,974	18,932	19,670	40,146
	Milk powder—					
051.72, 73	Full cream . . .	"	48,018	47,272	54,424	50,585
051.76-79	Skim . . .	"	188,584	196,029	156,230	208,893
051.81, 82	Buttermilk or mixed skim and buttermilk . . .	"	32,518	33,592	33,859	40,675
503.17-32	Motors, electric . . .	'000	2,667	2,911	3,203	3,155
	Motor vehicles, finished—					
581.02-08	Cars . . .	No.	238,720	270,963	288,104	339,133
581.10-16	Station wagons . . .	"	57,534	59,047	53,788	54,998
582.04	Utilities . . .	"	33,909	31,174	33,971	37,416
582.06	Panel vans . . .	"	14,013	14,687	15,726	18,610
582.08-24	Truck and truck-type vehicles . . .	"	768	1,137	1,664	1,000
	Motor vehicles, partly finished—					
581.22-28	Cars, station wagons, utilities, vans . . .	"	1,381	1,663	1,397	1,663
582.31, 32	Trucks and truck-type vehicles . . .	"	21,747	21,857	25,168	26,724
582.33-46	Motor vehicle safety belts . . .	"	835,162	962,851	984,640	
589.81-89						
465.16, 17	Nails . . .	tons	23,830	22,925	23,243	
782.03, 04	Neckties . . .	doz	490,677	473,503	439,102	
	Oatmeal and rolled oats—					
062.61, 63	For porridge, etc. . .	cwt	340,781	314,319	309,476	295,835
062.65	Other . . .	"	308,712	116,034	(b)	
393.08-90, 394.01-54	Oils, vegetable, crude . . .	'000 lb	84,519	95,033	94,962	106,961
	Paints, etc.—					
412.02-20	Paints (not water) and enamels ready for use . . .	'000 gal	16,037	16,473	16,795	17,858
412.28	Paints (not water) in paste form . . .	'000 lb	2,589	2,238	1,888	1,949
412.22, 24	Lacquers (nitro-cellulose) . . .	'000 gal	1,427	1,427	1,481	1,446
412.32	Tinting colours, packaged ready for sale . . .	"	57	68	79	97
412.54	Stains and clear varnishes packaged ready for sale . . .	"	913	875	933	1,063
	Water paints—					
412.42, 44, 46	Emulsion type . . .	"	4,193	4,357	4,428	4,912
412.48, 50	In powder form . . .	'000 lb	870	745	776	673
412.64, 66	Thinners . . .	'000 gal	4,031	4,233	4,327	4,594
	Paper—					
351.11	Newsprint . . .	tons	97,255	92,648	123,935	170,576
351.17-79	Other . . .	"	389,223	385,567	440,153	484,793
352.11-33	Paperboard . . .	"	329,496	334,660	342,403	378,894
975.04, 09, 11	Perambulators, pushers and strollers . . .	No.	133,018	139,082	148,715	157,638
	Petrol—					
431.12	For blending and refining . . .	million gal				
431.04, 08, 20	Other (all types) . . .	"	1,832	50	(b)	
479.22	Plaster of paris . . .	tons	261,054	278,225	281,737	302,568
479.32, 33	Plaster sheets . . .	'000 sq yd	30,601	32,809	35,310	39,594
334.32, 34, 36, 38	Plywood, 1/4 inch basis . . .	'000 sq ft	200,451	230,018	228,581	
152.06	Pollard . . .	tons (2,000 lb)	284,628	305,468	311,960	312,485

(a) Excludes Northern Territory and Australian Capital Territory. (b) Not available for publication. (c) Excludes poultry and baby food. (d) New basis—electricity consumption meters from 1 July 1965.

## QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS: AUSTRALIA, 1966-67 TO 1969-70—continued

Commodity code	Article		1966-67 (a)	1967-68 (a)	1968-69	1969-70p
	Preserves—					
	Fruit					
076.01-50	Canned or bottled	'000 lb	611,552	659,700	511,970	677,067
074.01	Pulp and puree—single strength	'000 cwt	51	44	77	
	Vegetables—					
094.02-49	Canned or bottled	'000 lb	194,834	182,051	191,857	204,257
092.02, 06, 19	Quick frozen	"	118,216	100,862	142,790	169,820
	Pyjamas—					
774.21, 23	Men's and boys' (suits only)	doz	422,640	420,563	435,920	473,957
774.51-58	Women's and girls' (incl. nightdresses)	"	722,519	746,779	719,358	762,334
832.65, 85	Racquet frames (all types)	"	16,866	15,798	16,802	16,663
643.01, 03, 15-37	Radio receiving sets (including radiograms)	No.	445,766	522,394	676,312	721,501
	Records (Phonograph)—					
646.32, 35, 62, 65	Single play (78 and 45 rpm)	'000	4,727	5,296	7,080	6,856
646.37, 41, 51, 67, 71, 81, 85	Extended play	"	2,103	1,869	1,601	1,422
646.43, 45, 53, 55, 73, 75, 83, 85	Long play	"	6,714	6,847	9,512	10,476
657.32, 41, 53	Refrigerators, domestic	No.	232,200	245,138	(b)289,907	247,158
403, 404	Resins, plastic and synthetic, for all purposes	'000 cwt	2,854	3,349	3,883	3,814
061.67, 69	Rice, polished, unpolished and broken	"	2,373	(c)	3,302	
369.11	Ropes and cables (excluding wire)	cwt	130,845	117,670	(c)	(c)
372.70, 72, 374.59	Rugs	'000	191	170	184	
123.18-25	Sauce	'000 pints	42,213	43,692	41,655	
062.04	Semolina	tons (2,000 lb)	20,777	24,287	24,555	23,957
773.02-31	Shirts (men's and boys')	'000 doz	2,214	2,226	2,367	2,544
653.01	Sink heaters, electric	No.	10,174	9,941	9,473	8,580
671.14	Sinks, steel	"	226,076	212,752	220,376	248,825
805.01-13	Soap, for personal toilet use	'000 cwt	483	500	502	524
	Socks and stockings—					
775.51-82	Men's and youths'	'000 doz pairs	1,815	1,910	1,902	1,951
775.01-39	Women's and maids'	"	4,971	5,600	5,820	6,099
775.91-776.42	Children's and infants'	"	1,045	1,004	1,097	1,132
	Soup					
122.02, 09	Canned	'000 pints	78,985	67,201	71,413	74,160
122.13, 15	Dry-mix	'000 lb	8,803	9,127	9,141	
127.11-19	Starch	"	165,563	183,800	204,105	232,721
401.53	Stearine (stearic acid)	"	10,722	11,780	12,890	
461.20	Steel, constructional, fabricated	tons	547,258	558,591	539,218	
	Stoves, ovens and ranges, domestic cooking—					
661.01-11	Electric(d)	No.	192,655	193,627	210,804	222,613
661.31-42	Gas(e)	"	75,482	73,127	84,614	83,318
662.01, 03	Solid fuel	"	18,785	14,921	13,119	10,213
	Sugar—					
102.01, 02	Raw (94 net titre)	'000 tons	2,343	2,334	2,643	
102.11	Refined	"	613	614	643	
405.36	Sulphate of ammonia	tons	110,246	87,007	93,589	114,085
415.07	Superphosphate	'000 tons (f)	4,430	(f)3,935	(g)3,879	(g)3,598
803.61	Talcum powder	'000 lb	8,134	8,975	9,510	
	Tallow (including dripping), rendering—					
391.14, 16	Edible	"	150,789	148,099	164,278	
391.24	Inedible	"	361,588	353,901	357,343	
643.51-68	Television sets	No.	254,811	253,247	283,398	321,740
645.52-66	Television picture tubes	"	368,517	512,159	394,942	404,501
	Tiles, roofing—					
475.30	Cement	'000	88,509	96,831	116,227	130,761
472.12	Terracotta	"	47,101	46,972	49,956	52,768
	Timber—					
331.01-07	From native logs—					
	Hardwood, etc.	'000 super ft	1,143,814	1,165,376	(c)	
331.09-19	Softwood	"	317,591	307,683	(c)	
331.23, 25	From imported logs	No.	25,771	32,379	(c)	
661.21, 23	Toasters, electric (domestic)	'000 lb	366,972	331,717	392,321	374,766
183.02-28	Tobacco	'000 gal	7,595	7,463	7,314	
094.51	Tomato juice	'000 pints	2,627	2,463	2,114	1,930
094.53	" paste and puree	'000 cwt	22,776	11,546	13,663	
094.57	" pulp	'000 cwt	181	193	127	
373.58-64	Towels	'000 doz	992	892	823	895
671.51-59	Toilet cisterns	No.	352,791	370,346	398,751	459,759
683.03-11	Transformers, chokes and ballasts, for distribution of power and light, etc.	'000	16,823	15,892	16,106	16,285
622.01-07, 19	Tubes, pneumatic(h)	'000	4,211	4,528	4,676	
369.21-27	Twine (all types)	cwt	248,825	185,966	(c)	
621.31-37	Tyres, pneumatic(h)	'000	5,930	6,887	(i)7,400	(i)8,031
863.01	Umbrellas, street and general purpose	No.	825,032	930,266	611,490	
774.01-18, 41-47, 60, 62, 91-97	Underwear, (men's, women's, children's)	'000 doz	6,179	6,624	(j)6,252	(j)6,270

(a) Excludes Northern Territory and Australian Capital Territory. (b) Code 657.53 not collected prior to July 1968. (c) Not available for publication. (d) Includes wall ovens but excludes cooking tops and portable units. (e) Upright and elevated (with ovens) including wall ovens, but excluding hotplates, stovettes, etc. (f) Excludes ammonium phosphate. (g) Source: Department of Primary Industry, includes ammonium phosphate. (h) Excludes bicycle tubes and tyres. (i) Excludes Code 621.35. (j) Excludes Codes 774.16 and 774.18.

**QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING  
ESTABLISHMENTS: AUSTRALIA, 1966-67 TO 1969-70—continued**

<i>Commodity code</i>	<i>Article</i>		<i>1966-67 (a)</i>	<i>1967-68 (a)</i>	<i>1968-69</i>	<i>1969-70<sup>p</sup></i>
692.01	Vacuum cleaners (domestic)	No.	156,307	163,613	151,532	156,213
	Wash basins—					
671.31	C.I.P.E.	No.	58,040	52,919	44,631	(b)
671.37	Earthenware	"	146,546	159,480	184,625	230,809
671.33-35	Pressed steel	"	78,893	91,796	97,685	97,990
693.02-18	Washing machines, household, electric	"	231,601	278,348	302,532	316,213
	Weatherboards—					
332.12	Australian timber	'000 super ft	19,025	18,799	14,564	
322.14	Imported timber	"	1,857	2,175	1,917	
152.14	Wheatmeal for stock feed	tons (2,000 lb)	228,872	283,589	202,913	218,584
519.01	Wheelbarrows (metal)	No.	123,291	118,797	109,156	
	Wine, beverage—					
172.42	Fortified	'000 gal	12,401	11,534	12,447	
172.46	Unfortified	"	12,020	14,562	16,401	
341.31-45	Wood pulp	tons	357,665	351,268	410,933	513,581
242.07-11	Wool, scoured or carbonised	'000 lb	154,119	157,860	155,882	161,706
242.32	Wool tops, pure	"	44,535	42,439	43,538	41,657
	Yarn (including mixtures)—					
364.11-50	Cotton	"	60,792	60,849	61,114	64,558
363.47-75	Woollen	"	32,641	34,596	35,672	39,621
363.17-31	Wool worsted	"	18,781	18,896	18,364	18,800
365.38-66	Rayon and acetate, spun	"	6,771	9,213	10,996	12,145
365.90, 366.03 04, 16, 29, 30, 42, 55, 56, 88, 96, 97 }	Synthetic (non-cellulosic) fibres spun	"	8,843	9,543	10,408	11,692
457.04	Zinc, refined(c)	tons	197,030	187,565	228,198	257,674

(a) Excludes Northern Territory and Australian Capital Territory.  
origin only includes small quantities of zinc dust.

(b) Not available for publication.

(c) Primary



## CHAPTER 22

# RURAL INDUSTRY

This chapter is divided into four major parts:

- Introduction, dealing with the disposal of Crown lands, closer settlement and war service settlement and general rural activity in Australia;
- Agricultural production;
- Pastoral production; and
- Other rural industries, which includes the dairying, pig, poultry and bee-farming industries.

For greater detail on the subjects dealt with in this chapter see the annual bulletins *Rural Industries* (10.29), *Value of Production* (10.24) (10.25) (10.26) (10.27), and *Manufacturing Commodities* (12.7) (regarding butter, cheese, etc., factories) issued by this Bureau. Current information on commodities produced is obtainable in the *Quarterly Summary of Australian Statistics* (1.3), *Monthly Review of Business Statistics* (1.4), *Monthly Bulletin of Production Statistics* (12.14), and *Digest of Current Economic Statistics* (monthly) (1.5). The series of bulletins *Classification of Rural Holdings by Size and Type of Activity* (10.28) (see page 737) shows particulars of rural holdings classified by size, nature and area of crops, and numbers of livestock, and also according to main type of activity. The mimeographed annual *Apparent Consumption of Foodstuffs and Nutrients* (10.10) contains details of the production and utilisation of foodstuffs. The following mimeographed publications also contain considerable detail on the particular subjects dealt with.

**General.** *Value of Primary Production (excluding Mining) and Indexes of Price and Quantum of Farm Production* (annual) (10.27), *Value of Primary Production (excluding Mining) (Preliminary Statement)* (annual) (10.25), *Gross Value of Primary Production (excluding Mining) (Preliminary Estimates)* (annual) (10.24), *Farm Machinery on Rural Holdings* (annual) (10.7), *New Tractors: Receipts, Sales and Stocks* (quarterly) (12.18), and *New Agricultural Machinery* (quarterly) (12.1).

**Agricultural production.** *Rural Land Use and Crop Production* (annual) (10.30), *Agricultural Statistics (Preliminary Statement)* (annual) (10.2), *The Wheat Industry* (four a year) (10.35) (10.36) (10.52) (10.53), *The Fruit Growing Industry* (annual) (10.11), and *Fruit Statistics (Preliminary Statement)* (annual) (10.12), *Principal Crop Statistics: Australia, Preliminary Estimates* (annual) (10.50).

**Pastoral production.** *Livestock Statistics* (annual) (10.15), *Livestock Numbers* (annual) (10.14), *The Meat Industry* (monthly) (10.16), *Wool Production* (annual) (10.39), and *Wool Production and Utilisation* (annual) (10.38).

**Other rural production.** *The Dairying Industry* (monthly (10.6) and annual (10.5)), *Chicken Hatchings and Poultry Slaughterings* (monthly) (10.44), *Production Summaries No. 36—Preserved Milk Products* and *No. 55—Butter and Cheese* (monthly) (12.16), and *Bee Farming* (annual) (10.3).

Detailed particulars of the early development of various aspects of Australian rural industry are given in previous issues of the Year Book up to No. 53 (see, for example No. 53, pages 885, 888, 891–2).

**Rural debt.** For estimated figures of rural debt to specified lenders for the years 1966–67 to 1970–71 see page 517 of this Year Book.

Throughout this chapter yearly periods for area and production of crops relate to years ended 31 March. Other periods in respect of e.g. factory and trade statistics relate to years ended 30 June.

## INTRODUCTION

### Disposal of Crown lands

#### Land legislation and tenures

The following sections contain figures showing the extent of the different land tenures in the several States and Territories, classified under broad headings indicating the nature of the tenure, together with some general descriptive matter. Information in greater detail, descriptions of the land

tenure systems of the several States and the internal Territories, and conspectuses of land legislation in force and of the systems of land tenure were provided in Year Book No. 48 and previous issues (see also Year Book No. 50, page 85 and List of Special Articles, etc. preceding General Index to this Volume).

### Free grants and reservations

Provision exists in all States except Tasmania for the disposal of Crown lands for public purposes by free grants, and in all States for the temporary and or permanent reservation of Crown lands for public purposes. In the Northern Territory any Crown lands not subject to any right of, or contract for, purchase may be resumed for public purposes, and the whole or any portion of the lands resumed may be reserved for that purpose. In the Australian Capital Territory, under the *Seat of Government (Administration) Act* 1910, Crown lands may not be sold or disposed of for any estate in freehold except in pursuance of some contract entered into before the commencement of the Act.

### AREAS OF CROWN LANDS RESERVED: STATES AND TERRITORIES, 1967 TO 1971 (‘000 acres)

Year	N.S.W.(a)	Vic.(a)	Qld(b)	S.A.(a)	W.A.(a)	Tas.(a)	N.T.(a)	Total(c)
1967 . .	15,875	(b)8,921	27,240	22,878	80,491	4,938	60,974	221,317
1968 . .	15,872	(b)8,952	27,833	22,919	80,658	5,327	60,988	222,549
1969 . .	15,849	n.a.	28,209	22,919	80,772	6,313	61,124	n.a.
1970 . .	15,793	(d)7,787	28,466	22,925	84,018	6,374	62,217	227,580
1971 . .	15,747	(d)7,790	28,636	22,939	90,333	6,240	62,348	234,033

(a) At 30 June.  
set aside for roads.

(b) At 31 December.

(c) Excludes the Australian Capital Territory.

(d) Excludes areas

The purposes for which areas were reserved are given hereunder for the latest year available as set out in the table above.

*New South Wales.* For travelling stock, 4,923,477 acres; forest reserves, 1,539,824 acres; water and camping reserves, 755,541 acres; mining reserves, 995,226 acres; recreation and parks, 732,489 acres; other reserves, 6,800,690 acres; total, 15,747,247 acres.

*Victoria.* Water reserves, 214,285 acres; forest and timber reserves, 5,805,616 acres; national parks, 506,531 acres; public parks and camping reserves, 120,316 acres; other reserves (excluding roads), 1,143,132 acres; total, 7,789,880 acres.

*Queensland.* For timber reserves, 1,736,838 acres; State forests and national parks, 10,206,459 acres; Aboriginal reserves, 7,005,672 acres; streets, surveyed roads and stock routes, 4,320,533 acres; general reserves, 5,366,152 acres; total, 28,635,654 acres.

*South Australia.* Total area of surveyed roads, railways and other reserves, 22,938,564 acres including 18,842,645 acres set apart as Aboriginal reserves.

*Western Australia.* For State forests, 4,476,608 acres; timber reserves, 169,648 acres; other reserves, 85,686,507 acres; total, 90,332,763 acres.

*Tasmania.* For forest reserves, 5,211,000 acres; national parks, 1,029,000 acres; total, 6,240,000 acres.

*Northern Territory.* For Aboriginal, defence and public requirements, 62,348,000 acres.

### Conditional and unconditional purchases of freehold

Crown lands in the States may be disposed of by unconditional purchase at public auction or by certain other forms of purchase (for details see Year Book No. 48, pages 91–2). Conditional purchases of various types may also be made. In the Northern Territory only 0.1 per cent of the total area is alienated, the remainder being held under lease or licence, or reserved for various purposes or unoccupied. In the Australian Capital Territory about 16 per cent of the area is alienated or in process of alienation in consequence of contracts existing prior to the establishment of the Territory.

### Leases and licences

Well over half the area of the States of New South Wales and South Australia and of the Northern Territory and more than four-fifths of that of Queensland are occupied under some form of lease or licence. In Victoria, only about one-tenth of the area is leased or licensed, more than half being alienated; in Western Australia, more than one-third is leased or licensed, most of the remainder

being unoccupied; in Tasmania about one-third is leased or licensed, while about one-quarter of the area of the State is occupied by the Crown or unoccupied, and the remainder alienated. Areas leased or licensed in the States are held under Crown lands Acts, closer settlement Acts, mining Acts, etc., and in the Territories under various Ordinances.

*Land Acts and Ordinances.* The types of lease and licence which obtain under land legislation cover a wide range, and vary with each State or Territory. The following are examples: grazing or pastoral, settlement and closer settlement, settlement purchase, conditional and unconditional purchase, perpetual and Crown; however, the variations of these forms and the special forms of lease and licence which exist would extend this list considerably. Details of the various types in existence are given in Year Book No. 48, pages 93-4, and some detail is included in the tables on pages 878-81 of Year Book No. 53.

**AREAS OCCUPIED UNDER LEASE OR LICENCE OTHER THAN MINING AND  
FORESTRY: STATES AND TERRITORIES, 1967 TO 1971**  
(<sup>'000 acres</sup>)

Year	N.S.W.(a)	Vic.(a)	Qld(b)	S.A.(a)	W.A.	Tas. (a)	N.T. (a)(c)	A.C.T. (a)(c)	Total
1967	111,300	(b)5,993	359,152	149,192	(a)244,715	915	194,543	262	1,066,072
1968	110,499	(b)5,636	353,163	149,530	(a)244,804	766	191,595	254	1,056,247
1969	112,250	n.a.	346,946	149,327	(a)245,240	699	192,966	251	n.a.
1970	111,501	(a)5,469	342,003	149,951	(a)247,010	698	197,033	251	1,053,916
1971	111,342	(a)5,535	339,024	149,651	(b)252,034	851	199,136	243	1,057,816

(a) Year ended 30 June.

(b) Year ended 31 December.

(c) Leases and licences for all purposes.

### Closer settlement and war service settlement

#### Closer settlement

Particulars of the methods of acquisition and disposal of land for the closer settlement of civilians and returned service personnel (1914-18 War) in the several States are given in issues of the Year Book up to No. 22 (see No. 22, pages 163-9), and the results of the operations of the several schemes have appeared in subsequent issues in considerable detail. However, the amalgamation in some States of closer settlement records with those of other authorities has since made it impossible to obtain up-to-date figures for those States and for Australia as a whole. Page 96 of Year Book No. 48 contains particulars as at 30 June 1960 of the areas and costs for those States for which separate information is available.

#### War Service Land Settlement Scheme

The War Service Land Settlement Scheme provides for the settlement on the land of eligible ex-servicemen from the 1939-45 War and the Korea-Malaya operations. Finance for capital expenditure under the scheme in South Australia, Western Australia and Tasmania and for special loans to New South Wales and Victoria is provided through Loan (War Service Land Settlement) Acts. Finance for other aspects of the scheme in all States is provided by annual parliamentary appropriation. The *States Grants (War Service Land Settlement) Act 1952* provides that the responsible Commonwealth Minister may make grants of financial assistance to the States under such terms as he may from time to time determine. At 30 June 1970, 9,129 farms had been allotted from a total area of 13,936,731 acres acquired and no further farms are to be provided.

Particulars of expenditure on war service land settlement, to 30 June 1968, are given in Year Book No. 55, pages 716-17.

### Alienation and occupation of Crown lands

Detailed particulars of the alienation and occupation of Crown lands in the several States and Territories are given in previous issues of the Year Book up to No. 53 (see No. 53, pages 878-81).

The following table provides a summary for each State and Territory, and for Australia as a whole, of the alienation and occupation of Crown lands in 1971.



## ALIENATION AND OCCUPATION OF CROWN LANDS: STATES AND TERRITORIES, 1971

State or Territory	Private lands				Crown lands				Total area
	Alienated		In process of alienation		Leased or licensed		Other(a)		
	'000 acres	Per cent	'000 acres	Per cent	'000 acres	Per cent	'000 acres	Per cent	
N.S.W.(b)	61,996	31.3	3,904	2.0	112,926	57.0	19,211	9.7	198,037
Vic.(b)	33,299	59.2	384	0.7	5,535	9.8	17,028	30.3	56,246
Qld(c)	27,557	6.5	32,469	7.6	342,950	80.3	23,903	5.6	426,880
S.A.(b)	16,023	6.6	293	0.1	149,651	61.5	77,278	31.8	243,245
W.A.(c)	34,419	5.5	14,411	2.3	254,409	40.7	321,350	51.4	624,589
Tas.(b)	6,677	39.5	246	1.5	5,365	31.8	4,597	27.2	16,885
N.T.(b)	312	0.1	..	..	199,136	59.8	133,531	40.1	332,979
A.C.T.(b)(d)	84	14.0	9	1.6	243	40.5	264	43.9	601
Australia	180,367	9.5	51,716	2.7	1,070,215	56.3	597,164	31.4	1,899,462

(a) Occupied by Crown; reserved; unoccupied; unreserved. (b) At 30 June. (c) At 31 December. (d) Includes Jervis Bay area.

## Number and area of rural holdings

## Number and area

A holding in Australia has been defined by statisticians on a more or less uniform basis, and discrepancies which exist are not of sufficient importance to prevent comparisons. For the purpose of these statistics a holding has been defined as land of one acre or more in extent used for the production of agricultural produce (including fruit and vegetables) or for the raising of livestock (including poultry) and the production of livestock products.

There are considerable fluctuations from time to time in the numbers of very small holdings, and it is very difficult to determine in some cases whether or not they are rural holdings within the definition. In addition, in the very dry parts, such as the far west of New South Wales and Queensland and the remoter parts of South Australia and Western Australia, there are large areas of marginal lands sporadically occupied for extensive grazing under short-term lease or other arrangement, and the areas so occupied tend to fluctuate with the seasons. Similarly, there are rugged areas in the mountain country of some States which are also only occasionally occupied.

## RURAL HOLDINGS: NUMBER AND AREA, STATES AND TERRITORIES, 1966-67 TO 1970-71

Year	N.S.W.	Vic.(a)	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
NUMBER OF RURAL HOLDINGS									
1966-67	76,251	68,466	43,858	28,957	23,181	10,641	304	200	251,858
1967-68	76,225	72,802	43,694	29,058	23,116	10,631	305	196	256,027
1968-69	76,103	71,056	44,074	29,137	23,004	10,384	317	195	254,270
1969-70	75,908	69,498	43,829	29,035	22,937	10,159	322	193	251,881
1970-71	75,365	68,555	43,399	29,087	22,592	9,926	384	187	249,495
TOTAL AREA OF RURAL HOLDINGS ( <sup>'000</sup> acres)									
1966-67	171,652	38,653	379,977	161,510	274,765	6,507	170,018	350	1,203,431
1967-68	171,767	39,564	380,993	160,765	275,334	6,579	174,385	350	1,209,737
1968-69	171,020	39,182	378,956	162,109	276,174	6,591	177,942	346	1,212,320
1969-70	170,630	39,057	380,218	162,692	280,819	6,517	182,116	339	1,222,387
1970-71	171,068	38,945	382,253	162,584	283,107	6,501	184,943	337	1,229,739

(a) In 1967-68 the lists of land holdings used in the collection of agricultural and pastoral statistics in Victoria were reconciled with lists of rateable land of one acre or more in extent as recorded by municipalities for rating purposes.



**Land utilisation of rural holdings**

The following table shows the purposes for which the land on the rural holdings referred to in the preceding paragraphs was used.

**RURAL HOLDINGS: LAND UTILISATION, 1966-67 TO 1970-71**

('000 acres)

Year	Area used for crops(a)	Land lying fallow(b)	Area under sown grasses and clovers(c)	Balance of holdings(d)	Total area of holdings
1970-71—					
New South Wales . . . . .	12,121	2,422	11,879	144,645	171,068
Victoria . . . . .	4,519	2,300	21,093	11,032	38,945
Queensland . . . . .	4,614	1,753	6,339	369,547	382,253
South Australia . . . . .	6,220	1,000	6,254	149,111	162,584
Western Australia . . . . .	9,468	1,463	17,254	254,922	283,107
Tasmania . . . . .	210	57	2,061	4,17-	6,501
Northern Territory . . . . .	7	..	197	184,739	184,943
Australian Capital Territory . . . . .	6	..	96	235	337
<b>Australia . . . . .</b>	<b>37,165</b>	<b>8,995</b>	<b>65,173</b>	<b>1,118,406</b>	<b>1,229,739</b>
1969-70 . . . . .	42,163	7,127	61,252	1,111,845	1,222,387
1968-69 . . . . .	43,778	9,525	56,693	1,102,324	1,212,320
1967-68 . . . . .	38,730	9,340	54,379	1,107,287	1,209,737
1966-67 . . . . .	37,084	9,784	51,474	1,105,089	1,203,431

(a) Excludes (i) duplication on account of area double cropped, except for New South Wales and South Australia, and (ii) clovers and grasses cut for hay and seed which have been included in Area under sown grasses and clovers, and differs therefore from crop area figures shown later in this chapter. (b) Excludes short or summer fallow. (c) Includes paspalum. (d) Used for grazing, lying idle, etc.

**Classification by size and type of activity**

Some of the information obtained from the 1968-69 Agricultural Census has been classified by size of principal characteristics (area of holdings, area of sown grasses and clovers, area of selected crops, and numbers of livestock). In addition, all holdings have been classified according to type of activity. Tables showing this information, for statistical divisions and States, and an outline of the methods used have been published in a series of bulletins *Classification of Rural Holdings by Size and Type of Activity*, 1968-69. Similar information was published in a series of bulletins for the years 1959-60 and 1965-66. A size classification for each State is available for the year 1955-56.

**Employment on rural holdings****Persons engaged**

The following table shows, for each State and Territory, the recorded number of males working on rural holdings. Particulars for females are not available except for New South Wales and Victoria. Additional particulars relating to the number of males employed in agriculture up to 1941-42 are shown in Year Book No. 36, page 852, and previous issues. Similar details for later years are not available.

**MALES(a) ENGAGED ON RURAL HOLDINGS: STATES AND TERRITORIES, 31 MARCH 1971**

Males engaged	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Permanent—									
Owners, lessees or share-farmers . . . . .	54,232	50,970	41,363	21,264	16,388	6,652	198	113	191,180
Relatives of owner, lessee or share-farmer, over 14 years of age, not receiving wages or salary . . . . .	744	2,650	2,627	304	1,706	..	19	12	8,062
Employees, including managers and relatives working for wages or salary . . . . .	24,821	11,926	14,865	6,674	6,598	3,082	1,559	142	69,667
<b>Total permanent males . . . . .</b>	<b>79,797</b>	<b>65,546</b>	<b>58,855</b>	<b>28,242</b>	<b>24,692</b>	<b>9,734</b>	<b>1,776</b>	<b>267</b>	<b>268,909</b>
Temporary . . . . .	25,452	16,728	14,936	8,196	(b)	4,703	457	28	(b)
<b>Total males . . . . .</b>	<b>105,249</b>	<b>82,274</b>	<b>73,791</b>	<b>36,438</b>	<b>(b)</b>	<b>14,437</b>	<b>2,233</b>	<b>295</b>	<b>(b)</b>

(a) Details for females not available except for New South Wales and Victoria where 8,032 and 7,619 females respectively were engaged on rural holdings. (b) Not available for publication.

**Salaries and wages paid**

Particulars of salaries and wages paid to employees (including amounts paid to contractors) working full-time on rural holdings are shown below for the year 1970-71. Data for New South Wales, and hence Australia, are not available.

**EMPLOYEES ON RURAL HOLDINGS: SALARIES AND WAGES PAID(a)**  
**STATES AND TERRITORIES, 1970-71**  
 (\$'000)

<i>Employees</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Males and females—									
Permanent . . .	(b) {	32,754	40,796	16,815	20,379	8,440	3,949	518	(b) }
Temporary(c) . . .		30,496	46,483	16,357	19,413	5,705	631	166	
Total . . .		63,250	87,279	33,172	39,792	14,145	4,580	684	

(a) Includes value of keep.

(b) Not available.

(c) Includes amounts paid to contractors.

Similar information for Australia for years up to 1957-58 is given in Year Book No. 50, page 988, and in earlier Year Books.

**Persons residing permanently on holdings**

Particulars of persons (of all ages) residing permanently on rural holdings in each State and Territory at 31 March 1971, and throughout Australia for a series of years, are as follows.

**PERSONS (OF ALL AGES) RESIDING PERMANENTLY ON RURAL HOLDINGS**  
**STATES AND TERRITORIES, 31 MARCH 1971**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.(a)</i>	<i>A.C.T.</i>	<i>Aust.</i>
Males . . .	138,084	127,050	93,687	53,347	45,383	20,352	4,026	431	482,360
Females . . .	121,828	113,144	78,819	47,529	38,163	18,277	2,970	373	421,103
Total . . .	259,912	240,194	172,506	100,876	83,546	38,629	6,996	804	903,463

(a) Includes Aborigines.

**PERSONS (OF ALL AGES) RESIDING PERMANENTLY ON RURAL HOLDINGS**  
**AUSTRALIA, 31 MARCH 1967 TO 1971**

	<i>31 March</i>				
	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>	<i>1971</i>
Males . . . . .	529,378	525,754	516,365	502,099	482,360
Females . . . . .	457,507	455,050	447,809	435,948	421,103
Total . . . . .	986,885	980,804	964,174	938,047	903,463

**Farm machinery on rural holdings**

The tables following show the principal types of farm machinery on rural holdings in the States and Territories at 31 March 1971. Additional information was published in the statistical bulletin *Farm Machinery on Rural Holdings, Australia, 31 March 1971*. A more detailed analysis of tractors on rural holdings according to type, horse-power, type of fuel used, and age of tractor was published in the statistical bulletin *Tractors on Rural Holdings—Australia, 31 March 1969*. Details of grain and seed harvesters on rural holdings at 31 March 1970, classified according to type of propulsion, width of cut, age and type of front were published in the statistical bulletin *Grain and Seed Harvesters on Rural Holdings, 31 March 1970*.

## FARM MACHINERY ON RURAL HOLDINGS: STATES AND TERRITORIES, 31 MARCH 1971

Machinery	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Cultivating—									
Rotary hoes and rotary tillers—									
Self-contained power unit . . . . .	7,822	6,710	2,524	3,206	1,518	1,196	54	29	23,059
Tractor-mounted or trailing type . . . . .	7,764	5,663	5,029	2,236	1,616	906	34	16	23,264
Seeding and planting—									
Grain drills—									
Combine type . . . . .	28,628	19,710	14,453	15,100	14,043	1,511	65	57	93,567
Other types . . . . .	5,193	8,394	2,012	4,804	3,046	2,225	17	26	25,717
Maize and cotton planters(a) . . . . .	8,489	811	8,635	(b)	128	(b)	17	3	(c)18,083
Fertiliser distributors and broad-casters—									
Rotary . . . . .	18,625	25,285	7,355	8,191	9,315	4,229	64	70	73,134
Direct drop . . . . .	6,561	4,052	10,531	1,476	668	1,654	15	26	24,983
Harvesting—									
Grain and seed headers and harvesters(d)—									
Self-propelled . . . . .	4,972	1,648	3,137	2,216	1,727	142	19	10	13,871
Tractor drawn . . . . .	15,262	11,641	4,343	8,992	9,018	599	29	20	49,904
Agricultural mowers—									
Reciprocating—									
Power-driven . . . . .	19,116	28,479	8,745	9,511	6,776	4,942	46	83	77,698
Ground-driven . . . . .	1,134	1,288	1,852	647	275	512	3	7	5,718
Rotary types . . . . .	10,660	11,196	8,489	2,845	2,792	1,760	85	27	37,854
Hay rakes—									
Side delivery . . . . .	14,196	17,976	5,821	6,755	5,208	2,614	49	47	52,666
Other (including back and dump) . . . . .	4,719	5,498	9,492	2,199	3,293	1,640	9	16	26,866
Pick-up balers . . . . .	12,069	14,692	3,581	5,404	4,329	2,019	43	50	42,187
Potato diggers . . . . .	1,518	2,378	1,157	694	476	(c)944	(b)	(b)	(c)7,167
Forage harvesters . . . . .	2,986	2,134	1,541	814	626	393	20	9	8,523
Peanut pickers . . . . .	(b)	(b)	475	(b)	(b)	(b)	4	(b)	(c)479
Corn pickers . . . . .	410	88	798	(b)	(b)	(b)	(b)	(b)	(c)1,296
Other—									
Tractors—									
Wheel . . . . .	86,262	78,807	63,799	33,971	31,917	11,701	370	185	326,725
Crawler . . . . .		3,071	8,465	3,052	3,741	1,238	138	8	
Hammer mills . . . . .	9,078	6,434	8,461	3,372	2,524	691	25	18	30,603

(a) Number of units, i.e. number of rows that can be planted simultaneously. (b) Not collected. (c) Incomplete; see individual States. (d) Excludes reapers, binders, specialised clover harvesters and forage harvesters. (e) Includes 95 potato harvesters.

FARM MACHINERY ON RURAL HOLDINGS: AUSTRALIA  
31 MARCH 1967 TO 1971

Machinery	31 March—				
	1967	1968	1969	1970	1971
Rotary hoes and rotary tillers—					
Self-contained power unit . . . . .	27,788	27,174	25,722	24,549	23,059
Tractor-mounted or trailing type . . . . .	17,881	20,333	21,581	20,837	23,264
Seeding and planting—					
Grain drills—					
Combine type . . . . .	92,530	94,094	94,650	94,917	93,567
Other types . . . . .	29,605	29,634	28,490	27,196	25,717
Maize and cotton planters . . . . .	14,260	13,826	(a)18,495	(a)18,646	(a)18,083
Fertiliser distributors and broad-casters . . . . .	93,064	95,853	97,119	98,434	98,117
Harvesting—					
Grain and seed headers and harvesters—					
Self-propelled . . . . .	10,273	11,953	13,213	13,191	13,871
Tractor drawn . . . . .	54,644	55,929	53,883	50,163	49,904
Pick-up balers . . . . .	36,688	38,211	40,142	41,237	42,187
Forage harvesters . . . . .	7,214	7,545	8,016	8,421	8,523
Other—					
Shearing machines (number of stands) . . . . .	193,226	195,542	196,286	195,352	n.a.
Milkling machines (number of units) . . . . .	235,325	233,022	231,698	228,190	n.a.
Tractors—					
Wheel . . . . .	314,670	323,982	{ 299,297 24,299 }	329,969	326,725
Crawler . . . . .					

(a) Definition changed in 1969 when informants were asked to report in terms of numbers of units, i.e. the number of rows that can be planted simultaneously. Figures not strictly comparable with earlier years.

## The soils of Australia

Year Book No. 52 contains an article (pages 873-9) on the soils of Australia which deals with the following matters: nature and development of Australian soils, including the agricultural development of soils, and types of Australian soils. A soil map of Australia and illustrations are included on plates 47 to 51 of Year Book No. 52.

## Soil improvement and conservation

### Fertilisers

The bulk of Australia's requirements of nitrogenous and phosphatic fertilisers is supplied by the domestic industry. Requirements of potassic fertilisers are primarily imported. Raw materials and manufactured fertilisers which are not available in Australia are imported as required.

As a result of widespread deficiency of phosphorus in Australian soils, phosphatic fertilisers account for a large proportion of usage both on crops and pastures. During 1970-71, 3,065,808 tons of superphosphate were manufactured in Australia; nitrogen, phosphorus, and potassium are used in the ratio 1:7:1 approximately.

Information regarding the area treated with artificial fertilisers and the quantity of artificial fertilisers (superphosphate, bonedust, nitrates, etc.) used in each State during the 1970-71 season is given in the following table.

AREA FERTILISED AND QUANTITY OF ARTIFICIAL FERTILISERS USED  
STATES AND TERRITORIES, 1970-71

State or Territory	Crops			Pastures			Total		
	Area fertilised	Super-phosphate used	Other artificial fertilisers used	Area fertilised	Super-phosphate used	Other artificial fertilisers used	Area fertilised	Super-phosphate used	Other artificial fertilisers used
	'000 acres	tons	tons	'000 acres	tons	tons	'000 acres	tons	tons
New South Wales .	6,293	265,127	87,818	8,018	454,666	20,617	14,311	719,793	108,435
Victoria .	3,779	184,407	47,580	9,833	605,148	79,114	13,613	789,555	126,694
Queensland .	1,193	54,445	191,480	382	33,767	10,178	1,576	88,212	201,658
South Australia .	4,654	238,700	27,930	4,788	263,022	8,863	9,442	501,722	36,793
Western Australia .	9,445	453,548	80,989	12,438	667,738	28,021	21,883	1,121,286	109,010
Tasmania .	199	17,376	12,936	1,325	95,792	13,921	1,524	113,168	26,857
Northern Territory	4	249	228	95	5,126	40	99	5,375	268
Australian Capital Territory .	3	179	83	34	1,693	151	38	1,872	234
Australia .	25,571	1,214,031	449,044	36,913	2,126,952	160,905	62,484	3,340,983	609,949

Particulars of the quantity of artificial fertilisers used in each State and Territory during each of the seasons 1966-67 to 1970-71 are shown in the next table. These details include the quantity used for the top dressing of pasture lands.

QUANTITY OF ARTIFICIAL FERTILISERS USED: STATES AND TERRITORIES  
1966-67 TO 1970-71

(Tons)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1966-67	864,569	1,113,392	242,615	598,808	1,096,555	169,756	681	3,393	4,089,769
1967-68	893,469	1,068,605	263,460	599,877	1,219,968	172,195	4,629	2,695	4,224,898
1968-69	897,893	954,807	264,973	580,756	1,323,293	160,462	5,117	2,195	4,189,496
1969-70	903,334	1,007,216	292,376	590,261	1,416,936	153,649	5,414	2,785	4,371,971
1970-71	828,228	916,249	289,870	538,515	1,230,296	140,025	5,643	2,106	3,950,932

The chief sources of Australia's supplies of natural phosphate are Nauru, Christmas Island (Indian Ocean), Gilbert and Ellice Islands and Morocco. Sodium nitrate is obtained chiefly from Chile and the U.S.A.



## ARTIFICIAL FERTILISERS: IMPORTS INTO AUSTRALIA, 1966-67 TO 1970-71

<i>Fertiliser</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
QUANTITY ( <sup>1</sup> 000 cwt)					
Ammonium fertilisers . . . . .	1,973	2,893	2,193	637	318
Potassium fertilisers . . . . .	2,398	2,602	2,699	2,663	3,066
Phosphate fertilisers . . . . .	65,436	65,916	63,531	52,986	41,484
Sodium nitrate . . . . .	99	161	103	100	105
Other . . . . .	885	887	1,603	547	361
<b>Total . . . . .</b>	<b>70,791</b>	<b>72,458</b>	<b>70,129</b>	<b>56,933</b>	<b>45,334</b>
VALUE (\$ <sup>1</sup> 000 f.o.b.)					
Ammonium fertilisers . . . . .	4,161	5,016	3,813	1,815	1,014
Potassium fertilisers . . . . .	3,875	3,771	3,458	3,584	4,859
Phosphate fertilisers . . . . .	29,050	32,162	31,606	28,109	22,174
Sodium nitrate . . . . .	249	390	255	327	295
Other . . . . .	2,698	3,219	4,247	1,888	994
<b>Total . . . . .</b>	<b>40,033</b>	<b>44,558</b>	<b>43,379</b>	<b>35,723</b>	<b>29,336</b>

Exports of fertilisers (manufactured locally) amounted to 293,000 cwt valued at \$205,000 in 1970-71 compared with 249,000 cwt valued at \$934,000 in 1969-70.

## Aerial agriculture

Extensive use is made of aircraft for top-dressing and seeding, for spraying and dusting of crops and pastures, and for pest and vermin extermination.

For 1956-57 (the first year for which data are available) the total area treated was 1,466,000 acres; in 1970-71 the total was 11,320,000 acres. The following table shows details of area treated and materials used for each State for the five years ended 31 March 1971.

## AERIAL AGRICULTURE, 1966-67 TO 1970-71

<i>Year ended 31 March</i>	<i>Area topdressed and seeded</i>	<i>Area sprayed</i>	<i>Total area treated(a)</i>	<i>Materials used</i>		<i>Total flying time</i>
				<i>Super- phosphate</i>	<i>Seed</i>	
	<sup>1</sup> 000 acres	<sup>1</sup> 000 acres	<sup>1</sup> 000 acres	tons	<sup>1</sup> 000 lb	hours
1971—						
New South Wales(b) . . . . .	4,609	1,203	5,959	207,890	1,758	39,846
Victoria . . . . .	1,534	237	1,864	90,859	174	15,294
Queensland(c) . . . . .	446	436	1,012	(d)	366	(d)
South Australia . . . . .	(d)	157	576	23,551	(d)	4,605
Western Australia . . . . .	905	(d)	(d)	52,646	71	10,662
Tasmania . . . . .	(d)	(d)	(d)	(d)	(d)	(d)
<b>Australia . . . . .</b>	<b>8,165</b>	<b>2,778</b>	<b>11,320</b>	<b>410,773</b>	<b>2,450</b>	<b>83,692</b>
1970 . . . . .	10,270	3,723	14,868	550,952	2,854	10,2619
1969 . . . . .	9,474	4,580	14,416	436,589	4,125	99,639
1968 . . . . .	10,495	(d)	14,348	524,374	3,249	102,112
1967 . . . . .	11,646	3,192	15,237	596,628	2,407	108,688

(a) Includes other types of treatment (rabbit baiting, etc.). (b) Includes details for the Australian Capital Territory.  
(c) Includes details for the Northern Territory. (d) Not available for publication.

### Pasture improvement

An article on pasture improvement, which includes notes on indigenous and introduced species of grasses and which traces the development of pasture research in Australia, appears on pages 1001-2 of Year Book No. 49.

### Soil conservation

Year Book No. 49 contains an article (pages 1003-4) on soil conservation which deals with the following matters: land use and soil erosion, agents of erosion, prevention and control, and the activities of various Commonwealth and State authorities which promote and co-ordinate research into the problems of soil erosion and the initiation of preventive measures.

## AGRICULTURAL PRODUCTION

In general, statistics in this chapter relating to agricultural production are derived from returns supplied by approximately 250,000 farmers who utilise one acre or more of land for agricultural or pastoral purposes. The latest figures available are those for the year 1970-71. The returns are collected on a substantially uniform basis in all States at 31 March each year, and relate mainly to crops sown in the previous twelve months. Where harvests are not completed by March (e.g. potatoes), provision is made in some states for a special collection after the harvest is completed and in others for the inclusion of the total estimated yield expected from the complete harvest. In cases where additional data are available from marketing authorities or other sources these are used in conjunction with the annual census returns. The statistics published in this section are therefore shown in 'agricultural' years. For most purposes there will be little error involved in considering them as applying to years ended 30 June.

For more detailed information on period covered and details of the weights and measures used in recording production of agricultural commodities *see* introductory notes to the bulletin *Rural Industries*. Details of weights and measures are also included after the Contents of this Year Book.

### Progress, assistance and control

#### Progress of cultivation

The following table shows the area of crops in each of the States and Territories of Australia at ten-yearly intervals since 1860-61 and during each of the ten seasons 1961-62 to 1970-71. Plate 39 in this chapter shows the area of crops in Australia from 1900-01 onward (page 746).

AREA OF CROPS: STATES AND TERRITORIES, 1860-61 TO 1970-71  
(<sup>000</sup> acres)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1860-61	246	387	4	359	25	153	..	..	1,174
1870-71	385	693	52	802	55	157	..	..	2,144
1880-81	606	1,549	114	2,087	64	141	..	..	4,561
1890-91	853	2,032	225	2,093	70	157	..	..	5,430
1900-01	2,447	3,114	458	2,370	201	224	..	..	8,814
1910-11	3,386	3,952	667	2,747	855	287	..	..	11,894
1920-21	4,465	4,490	780	3,231	1,805	297	..	2	15,070
1930-31	6,811	6,716	1,144	5,426	4,792	268	2	5	25,164
1940-41	6,375	4,467	1,734	4,255	4,027	254	..	6	21,118
1950-51	4,761	4,537	2,077	3,812	4,650	290	n.a.	6	20,133
1960-61	8,044	5,838	3,057	5,399	6,871	357	2	8	29,576
1961-62	8,288	5,626	3,216	5,024	7,112	364	2	7	29,639
1962-63	8,903	6,318	3,490	5,495	7,482	395	2	7	32,092
1963-64	8,997	6,102	3,665	5,975	6,915	380	3	8	32,045
1964-65	10,334	6,477	3,967	5,965	7,505	404	4	9	34,665
1965-66	9,052	6,219	4,119	6,030	8,680	386	4	8	34,498
1966-67	12,421	6,765	4,605	6,488	8,817	444	4	10	39,553
1967-68	12,985	6,250	4,928	6,430	9,138	423	6	7	40,168
1968-69	15,570	7,910	5,391	7,704	9,812	476	7	11	46,882
1969-70	14,623	6,599	5,744	6,935	9,905	413	9	9	44,236
1970-71	12,408	5,585	4,813	6,439	9,728	418	14	7	39,412

### The Australian Agricultural Council

The influence of government and semi-government authorities on Australian rural industry is most apparent in the fields of guaranteed prices, subsidies and controlled marketing. Many of these aspects of intervention at the national level take place indirectly through the Australian Agricultural Council. This is a permanent organisation which was formed following a conference of Commonwealth and State Ministers on agricultural and marketing matters held at Canberra in December 1934. The Council consists of the Commonwealth Ministers for Primary Industry, Trade and Industry, Interior, and External Territories and the State Ministers of Agriculture, with power to co-opt the services of other Commonwealth and State Ministers as required. The principal functions of the Council are: the promotion of the welfare and development of agricultural industries generally; the exchange of information on agricultural production and marketing; the improvement of the quality of agricultural products and the maintenance of high grade standards; to ensure, as far as possible, balance between production and available markets; and organised marketing.

In addition, a permanent Standing Committee on Agriculture was formed to advise the Council, to secure co-operation and co-ordination in agricultural research, to advise State and Commonwealth Governments on the initiation and development of agricultural research, and to secure co-operation between all Governments in respect of quarantine measures against pests and diseases of plants and animals.

The Standing Committee on Agriculture comprises the permanent heads of the State Departments of Agriculture, the Secretary, Department of Primary Industry, and a representative each from the Commonwealth Departments of the Treasury, Health, Trade and Industry, Interior, External Territories, and from the Commonwealth Scientific and Industrial Research Organization.

### Financial assistance to primary producers

Financial assistance to primary producers by the Commonwealth Government may be provided in a number of ways. *See also* pages 546 and 551, Chapter 18, Public Finance. Examples of these follow.

*The Rural Reconstruction Scheme* provides finance to the States to help restore to economic viability those farms and farmers with capacity to maintain viability in the longer term. The forms of assistance comprise:

*debt reconstruction* to assist the farmer who, although having sound prospects of long term commercial viability, has used all his cash and credit resources and cannot meet his financial commitments; and

*farm build-up* to supplement the normal processes under which properties which are too small to be economic are amalgamated with an adjoining holding, or to assist a farmer with a property too small to be economic to purchase additional land to build up his property to at least economic size.

For those obliged to leave the industry limited assistance by way of a loan up to a maximum of \$3,000 is available where such assistance is necessary to alleviate conditions of personal hardship. In addition, such persons may be eligible for retraining under the Rural Reconstruction Employment Training Scheme.

Originally, \$100 million was to be made available to the States over a period of four years ending 30 June 1975. However, following a review of the scheme in March–April 1972 the Commonwealth undertook to provide the whole \$100 million by 30 June 1973. The Commonwealth has also undertaken to cover at least the liabilities incurred through approvals for assistance in the later months of 1972–73 for reconstruction to be financed in 1973–74 up to a limit of \$15 million. From the inception of the scheme until 30 April 1972, 9,372 applications for assistance had been received; 2,170 applications for debt reconstruction and 395 applications for farm build-up have been approved; and the value of assistance approved amounted to \$66.1 million.

*Five Year Dairy Industry Stabilisation Plan.* A bounty of \$27,000,000 paid annually on the production of butter, cheese and related butterfat products and an export bounty on processed milk products of a maximum of \$800,000 annually are both continued in the fifth Five Year Dairy Industry Stabilisation Plan which commenced 1 July 1967. Under special arrangements for the year 1970–71 a grant of \$15,882,000 was made to the dairying industry for distribution as bounty on the production of butter and cheese, in addition to the existing bounty of \$27,000,000. A grant of \$3,379,000 was also made for 1970–71 as bounty on the export of skim powder milk, casein and other non-fat products (*see* page 818). For 1971–72 a special grant of \$13,000,000 was made to bring the total bounty on butter and cheese production to \$40,000,000 for the year but the export bounty of \$3,379,000, which was a specific grant for one year only, was not renewed for 1971–72.



*Commitments to industry-financed stabilisation schemes.* In schemes of this nature the Commonwealth generally accepts a defined contingent liability to contribute to Government-approved stabilisation funds if growers' contributions prove inadequate. The contribution by the Commonwealth to the Wheat Prices Stabilisation Fund is an example.

Commonwealth payments are made to assist in control and eradication of diseases and pests by the various States and to provide natural disaster relief assistance, where these are beyond the financial capacity of the States.

For details of the Emergency Financial Assistance for Woolgrowers and the Wool Deficiency Payments Scheme *see* page 803. Details of the Marginal Dairy Farms Reconstruction Scheme are given on page 817.

### Research schemes

Over recent years, statutory research schemes financed by matching contributions from the Commonwealth and industry have been initiated in regard to tobacco, wool, wheat, dairy produce, meat, chicken meat, eggs, pigs, dried fruits and fish. On the basis of voluntary contributions from primary industries matched by the Commonwealth, schemes have been operative in relation to other research projects, e.g. on fruit fly, plague locusts, and pest management in pome fruit orchards; grape crop forecasting; and wine, honey, barley, banana and vegetable research.

### Agricultural research

Each State Department of Agriculture has a number of research stations, investigating problems mainly of the regions in which they are located. In addition, a substantial amount of research and investigational work is carried out by these departments on farmers' properties. The work is supported by central laboratory and service facilities in capital cities, and increasingly also by research, analytical and diagnostic laboratories in the country areas. Research results are passed on to farmers through field days, meetings and publications, and through extension staff of the State Departments of Agriculture. In recent years, there has been increasing interest in economic interpretation of research results.

The Commonwealth Scientific and Industrial Research Organisation carries out research at field stations and laboratory facilities in many parts of Australia, and also undertakes developmental studies at national level. Its research programmes in the agricultural and livestock fields are generally designed to give information which is widely applicable in the Australian environment, and which may require further regional interpretation and adaptation in order that it may be of use to the farming industries. The universities also carry out agricultural research at laboratory and field levels, in addition to their teaching functions.

For details of agricultural training *see* Chapter 19, Education, Cultural Activities and Research.

### Extension services

Agricultural extension services are provided by the States through their Departments of Agriculture, and in certain special fields by other State departments and authorities. Extension services also operate in the Northern Territory, Australian Capital Territory and Papua New Guinea.

All State Departments of Agriculture have university or agricultural college trained officers located in country areas. They carry out advisory and educational activities in the farming community, through contact with individual farmers, and through group and general publicity channels. In recent years several States have placed agricultural economists in country areas, strengthening the economic and farm management content of extension.

Support for the field extension staff is provided by information service groups, by applied research teams and industry and subject matter specialist groups and by diagnostic and analytical services. Some States have advisory staff specialising in agricultural mechanisation, and one State has begun to place extension method specialists in country areas.

Information services operated by Departments of Agriculture include agricultural journals, periodicals in various industry fields, pamphlets, newsletters, films, radio talks and television presentations. Group activities include discussion groups, field days, demonstrations, evening meetings and displays.

Since 1948 the Commonwealth has provided unmatched grants to the States to assist them in expanding their extension activities. In 1966, a programme of rapid expansion of this assistance beyond the existing provision of \$1.4 million per annum was undertaken, with \$21 million being made available during the subsequent five years. Provision for the five year period which began in 1971 amounts to \$37 million. The Commonwealth Extension Services Grant is used mainly by State Departments of Agriculture, and its scope includes extension, regional research, information, economic services and training.



Extension type services are available from non-government sources. Some commercial firms and co-operatives provide extension or advisory services primarily for their clients. Over the past decade a new profession of farm management consultants has emerged, providing fee or contract services ranging from property assessment or supervision to detailed farm management and development plans. Farmers' needs and interests were demonstrated by an initial phase of grouping themselves together in farm management clubs to employ their own advisors.

### Distribution, production and value of crops

#### Distribution of crops

The wide range of climatic and soil conditions over the agricultural regions of Australia has resulted in a diversity of crops being grown throughout the Commonwealth. Generally, cereal crops (excluding rice and sorghum) are grown in all States over wide areas, while industrial crops are confined to specific locations in a few States. A graph showing the area sown to principal crops for the years 1900-01 to 1970-71 appears on plate 39, page 746.

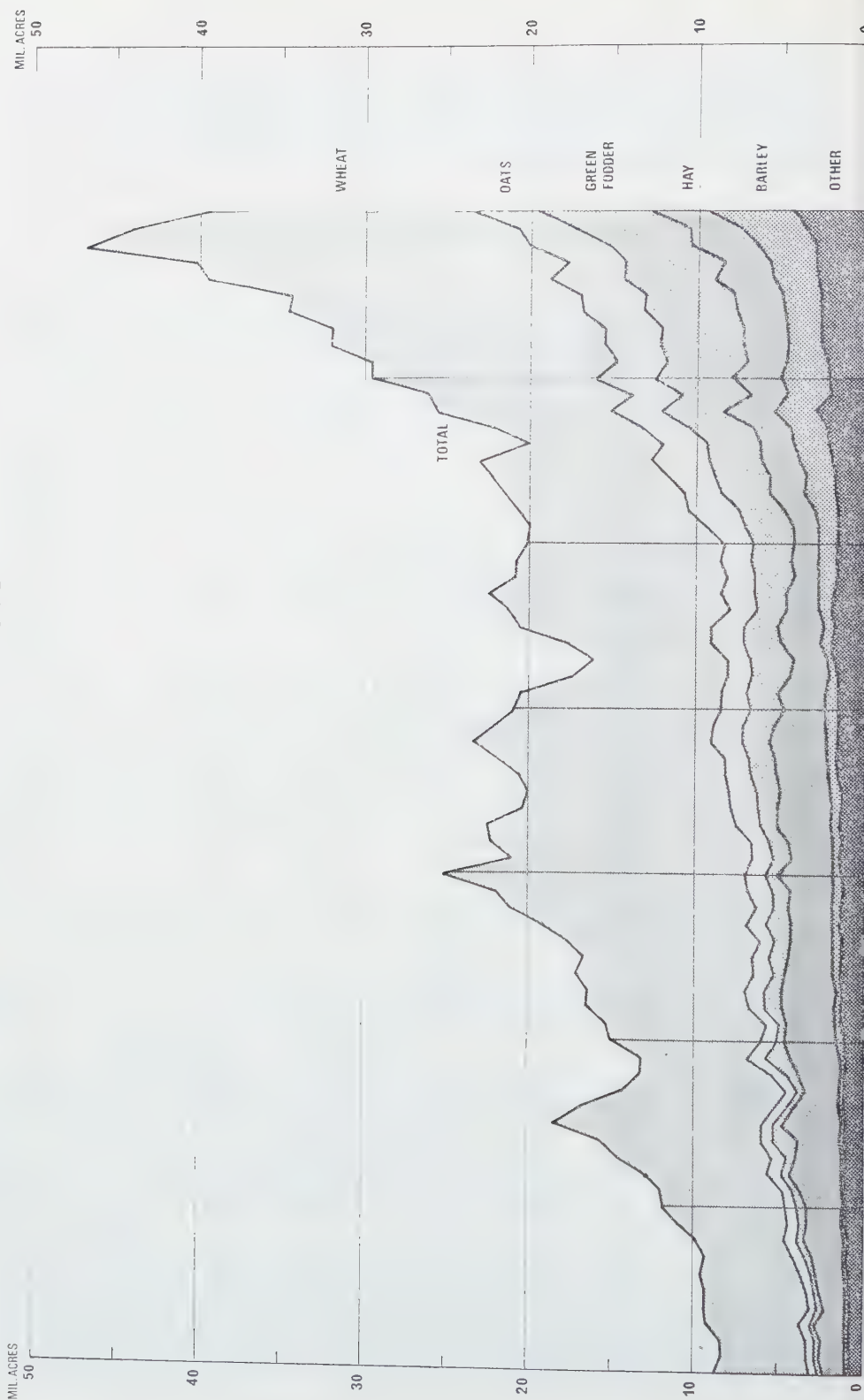
#### AREA OF CROPS: STATES AND TERRITORIES, 1970-71

(Acres)

Crops	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Cereals for grain—									
Barley—									
2-row . . .	471,916	639,757	202,599	1,659,337	780,504	30,387	..	..	3,784,500
6-row . . .	272,457	25,170	22,942	54,292	781,430	1,452	..	..	1,157,743
Maize . . .	82,318	1,322	127,815	..	153	..	(a)	..	(b)211,608
Oats . . .	1,001,625	986,511	60,381	481,673	1,283,855	23,336	..	581	3,837,962
Panicum millet and setaria . . .	6,076	5,641	109,754	..	..	..	(a)	..	121,471
Rice . . .	88,740	..	5,293	..	..	..	(a)	..	(b)94,033
Rye . . .	19,490	12,337	(a)	48,651	20,043	68	..	..	(b)100,589
Sorghum . . .	445,692	924	911,118	..	3,506	..	3,234	..	1,364,474
Wheat . . .	5,475,088	1,879,044	825,076	1,982,518	5,834,513	11,067	..	1,198	16,008,504
Hay . . .	760,590	1,266,159	161,395	484,955	468,965	211,660	4,895	3,080	3,361,699
Green feed . . .	3,130,031	421,435	1,287,364	1,485,141	367,386	66,588	413	1,611	6,759,969
Other stock fodder . . .	10,550	22,483	1,122	35,069	5,545	17,127	..	..	91,896
Grass seed—									
Lucerne . . .	21,839	527	197	49,620	(c)	(c)	..	..	(b)72,183
Clover . . .	15,165	3,719	..	4,111	38,540	2,378	..	..	63,913
Other . . .	14,336	28,354	91,284	11,594	41,085	(d)2,713	3,210	140	192,716
Industrial crops—									
Broom millet . . .	1,130	118	132	..	(a)	..	..	..	(b)1,380
Canary seed . . .	3,026	2,071	15,627	793	399	..	..	..	21,916
Cotton . . .	65,242	..	12,882	..	8,505	..	..	..	86,629
Flax for linseed . . .	50,751	16,877	8,786	695	25,751	..	..	..	102,860
Hops . . .	..	(e)897	..	..	(a)	(f)1,310	..	..	(b)2,207
Peanuts . . .	390	..	94,304	..	(a)	..	58	..	(b)94,752
Safflower . . .	49,012	12,530	5,073	420	1,349	..	..	..	68,384
Sugar cane—									
For crushing . . .	22,263	..	522,655	..	..	..	..	..	544,918
Stand-over and cut for plants . . .	20,350	..	116,992	..	..	..	..	..	137,342
Sunflower . . .	133,552	3,513	49,634	..	36	..	..	..	186,735
Tobacco . . .	3,042	10,481	13,411	..	..	..	..	..	26,934
Other . . .	45,364	46,925	11,930	2,189	18,446	..	..	..	124,854
Vegetables for human consumption—									
Onions . . .	2,047	2,593	3,218	2,229	301	316	(g)	6	(b)10,710
Potatoes . . .	22,102	34,965	15,925	7,160	6,246	8,994	(g)	12	(b)95,404
Other . . .	43,137	39,733	53,849	13,606	8,268	16,740	253	105	175,691
Vineyards—									
Bearing . . .	21,402	45,859	3,344	55,328	6,059	..	..	..	131,992
Not bearing . . .	6,390	5,074	502	13,004	649	..	..	..	25,619
Fruit—									
Bearing . . .	77,367	55,232	40,836	35,588	19,544	16,908	66	24	245,565
Not bearing . . .	15,800	11,382	13,916	9,714	4,247	3,945	54	14	59,072
Nurseries and cut flowers . . .	1,464	2,915	694	378	260	126	..	10	5,847
All other crops . . .	8,264	753	23,374	492	2,425	2,551	1,810	..	39,669
<b>Total area . . .</b>	<b>12,408,008</b>	<b>5,585,301</b>	<b>4,813,424</b>	<b>6,438,557</b>	<b>9,728,010</b>	<b>417,666</b>	<b>13,993</b>	<b>6,781</b>	<b>39,411,740</b>

(a) Not available for publication. Included in All other crops. (b) Incomplete; see individual States. (c) Not available for publication. Included in Other grass seed. (d) Excludes area sown simultaneously to oats. (e) Includes 64 acres not bearing. (f) Includes 194 acres not bearing. (g) Not available for publication. Included in Other vegetables.

# AREA OF CROPS: AUSTRALIA 1900-01 TO 1970-71



## AREA OF CROPS: AUSTRALIA, 1966-67 TO 1970-71

('000 acres)

Crop	1966-67	1967-68	1968-69	1969-70	1970-71
Cereals for grain—					
Barley—					
2-row . . . . .	1,951	2,074	2,620	2,910	3,785
6-row . . . . .	546	538	694	849	1,158
Maize . . . . .	201	200	164	197	212
Oats . . . . .	4,258	3,380	3,872	3,396	3,838
Rice . . . . .	74	76	83	99	94
Sorghum . . . . .	502	462	518	886	1,364
Wheat . . . . .	20,823	22,441	26,799	23,440	16,009
Hay . . . . .	3,496	2,800	3,955	3,192	3,362
Green feed . . . . .	5,399	5,916	5,714	6,654	6,760
Grass seed . . . . .	304	248	343	339	329
Industrial crops—					
Cotton . . . . .	53	77	81	77	87
Flax for linseed . . . . .	35	54	71	122	103
Hops . . . . .	2	2	2	2	2
Peanuts . . . . .	70	62	79	83	95
Safflower . . . . .	95	105	46	27	68
Sugar cane . . . . .	669	675	685	680	682
Tobacco . . . . .	22	23	26	27	27
Vegetables for human consumption—					
Onions . . . . .	10	10	11	10	11
Potatoes . . . . .	99	106	113	107	95
Other . . . . .	181	175	186	194	176
Vineyards . . . . .	139	140	143	150	158
Fruit . . . . .	313	311	310	309	305
All other crops . . . . .	311	295	367	486	692
Total . . . . .	39,553	40,168	46,882	44,236	39,412

## Production and yield per acre of crops

## PRODUCTION OF CROPS: STATES AND TERRITORIES, 1970-71

Crop		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Cereals for grain—										
Barley—										
2-row . . . '000 bus	11,289	13,509	2,492	31,739	18,348	1,258	..	..	..	78,634
6-row . . . . "	7,648	529	212	999	15,574	55	..	..	..	25,016
Maize . . . . .	4,191	62	4,076	..	2	..	(a)	..	..	(b)8,331
Oats . . . . .	25,133	25,720	464	8,408	28,657	486	..	..	14	88,882
Panicum, millet and setaria . . . . "	120	139	1,867	..	..	..	..	..	..	2,127
Rice . . . . .	15,140	..	558	..	..	..	(a)	..	..	(b)15,698
Rye . . . . .	306	102	(a)	232	174	1	..	..	..	814
Sorghum . . . . .	17,876	32	29,614	..	95	..	56	..	..	47,673
Wheat . . . . .	110,604	36,901	4,401	29,028	108,650	283	..	28	289,895	289,895
Hay . . . . .	'000 tons	1,355	2,455	376	743	662	441	6	6	6,044
Grass seed—										
Lucerne . . . . cwt	16,975	668	160	48,903	(a)	(a)	..	..	..	(b)66,706
Clover . . . . .	39,078	6,554	..	9,676	71,358	1,705	..	..	..	128,371
Other . . . . .	21,327	63,274	62,246	22,403	157,585	9,021	6,446	325	342,627	342,627
Industrial crops—										
Broom millet—										
Fibre . . . . cwt	5,334	715	403	..	(a)	..	..	..	..	(b)6,452
Grain . . . . bus	3,934	205	..	..	..	..	..	..	..	4,139
Canary seed . . . . "	37,596	16,088	139,597	6,018	2,610	..	..	..	..	201,909
Cotton, unginned . . '000 lb	85,122	..	19,191	..	27,700	..	..	..	..	132,013
Flax for linseed . . tons	16,917	6,370	1,937	254	4,840	..	..	..	..	30,318
Hops (dry weight) . . cwt	..	12,388	..	..	(a)	21,203	..	..	..	(b)33,591
Peanuts . . . . .	5,151	..	607,172	..	(a)	..	295	..	..	(b)612,618
Safflower . . . . '000 bus	406	77	20	4	8	..	..	..	..	515
Sugar cane for crushing . . '000 tons	1,160	..	16,206	..	..	..	..	..	..	17,366
Sunflower . . . . cwt	849,817	31,155	279,377	..	15	..	..	..	..	1,160,364
Tobacco (dried leaf) '000 lb	2,800	14,848	19,745	..	..	..	..	..	..	37,393
Vegetables for human consumption—										
Onions . . . . . tons	17,338	16,907	25,418	24,054	4,462	3,261	(a)	43	(b)84,177	84,177
Potatoes . . . . "	143,387	272,200	108,659	71,380	68,058	71,444	(a)	..	(b)735,173	735,173
Vineyards—										
Grapes—										
For drying . . . . "	42,848	159,501	..	14,805	3,206	..	..	..	..	220,360
For table . . . . "	6,881	10,826	4,261	1,042	1,921	..	..	..	..	24,931
For wine . . . . "	54,116	29,697	141	205,245	6,210	..	..	..	..	295,409

(a) Not available for publication. (b) Incomplete; see individual States.

## PRODUCTION OF PRINCIPAL CROPS: AUSTRALIA, 1966-67 TO 1970-71

<i>Crop</i>		1966-67	1967-68	1968-69	1969-70	1970-71
<b>Cereals for grain—</b>						
Barley—						
2-row . . . . .	'000 bus	49,207	28,731	58,438	61,652	78,634
6-row . . . . .	"	12,381	8,067	14,149	13,249	25,016
Maize . . . . .	"	7,491	7,132	5,869	7,543	8,331
Oats . . . . .	"	107,106	39,628	94,250	68,723	88,882
Rice . . . . .	"	11,250	11,597	13,420	12,951	15,698
Sorghum . . . . .	"	11,713	10,582	10,820	20,114	47,673
Wheat . . . . .	"	466,610	277,289	543,950	387,512	289,895
Hay . . . . .	'000 tons	6,371	3,812	7,328	5,728	6,044
Grass seed . . . . .	cwt	488,477	317,303	513,164	472,859	537,704
<b>Industrial crops—</b>						
Cotton, unginned . . . . .	'000 lb	120,360	214,736	223,423	186,443	132,013
Flax for linseed . . . . .	tons	13,744	10,482	19,496	36,093	30,318
Hops (dry weight) . . . . .	cwt	28,907	36,752	42,757	40,319	33,591
Peanuts . . . . .	"	827,151	606,159	334,601	840,851	612,618
Safflower . . . . .	'000 bus	1,369	878	570	230	515
Sugar cane for crushing . . . . .	'000 tons	16,685	16,756	18,413	15,535	17,366
Tobacco (dried leaf) . . . . .	'000 lb	27,905	24,721	34,072	37,553	37,393
<b>Vegetables for human consumption—</b>						
Onions . . . . .	'000 tons	84	58	86	84	91
Potatoes . . . . .	"	643	658	798	750	735
<b>Vineyards—</b>						
Grapes . . . . .	"	684	629	545	746	541
Wine made(a) . . . . .	'000 gal	41,734	44,444	51,995	63,127	55,257
Dried vine fruits . . . . .	'000 tons	107	85	55	93	59

(a) Beverage and distillation wine; includes farm wine in New South Wales and Queensland.

## YIELD PER ACRE OF PRINCIPAL CROPS: AUSTRALIA, 1966-67 TO 1970-71

<i>Crop</i>		1966-67	1967-68	1968-69	1969-70	1970-71
<b>Cereals for grain—</b>						
Barley—						
2-row . . . . .	bushels	25.2	13.9	22.3	21.2	20.8
6-row . . . . .	"	22.7	15.0	20.4	15.6	21.6
Maize . . . . .	"	37.2	35.6	35.7	38.3	39.4
Oats . . . . .	"	25.2	11.7	24.3	20.2	23.2
Rice . . . . .	"	152.6	152.7	161.2	130.5	166.9
Sorghum . . . . .	"	23.3	22.9	20.9	22.7	34.9
Wheat . . . . .	"	22.4	12.4	20.3	16.5	18.1
Hay . . . . .	tons	1.82	1.36	1.85	1.80	1.80
<b>Industrial crops—</b>						
Cotton, unginned . . . . .	lb	2,264	2,793	2,744	2,414	1,524
Flax for linseed . . . . .	tons	0.40	0.19	0.28	0.30	0.29
Hops (dry weight)(a) . . . . .	cwt	13.51	16.50	18.67	18.57	17.23
Peanuts . . . . .	"	11.86	9.82	4.26	10.13	6.47
Safflower . . . . .	bushels	14.47	8.40	12.29	8.58	7.54
Sugar cane for crushing(a) . . . . .	tons	29.93	30.30	32.39	29.54	31.87
Tobacco (dried leaf) . . . . .	lb	1,247	1,076	1,323	1,408	1,388
<b>Vegetables for human consumption—</b>						
Onions . . . . .	tons	8.27	5.94	7.62	8.17	8.54
Potatoes . . . . .	"	6.47	6.23	7.04	7.00	7.71
<b>Vineyards—</b>						
Grapes(a) . . . . .	"	5.37	4.92	4.28	5.80	4.10

(a) Per acre of productive crops.



**Value of agricultural production**

Further reference to the value of production of agriculture and other industries in Australia as well as a brief explanation of the terms used may be found in the chapter Miscellaneous.

**GROSS VALUE<sup>(a)</sup> OF AGRICULTURAL PRODUCTION: AUSTRALIA, 1966-67 TO 1970-71**  
(<sup>\$</sup>000)

<i>Crop</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
Cereals for grain—					
Barley . . . . .	73,743	42,222	70,531	65,982	110,789
Maize . . . . .	10,395	9,463	8,639	10,532	10,393
Oats . . . . .	83,384	34,205	58,763	33,351	54,283
Rice . . . . .	12,445	12,831	14,358	14,533	13,720
Wheat . . . . .	689,880	435,443	731,334	547,253	414,292
Hay . . . . .	151,470	107,434	166,284	114,742	115,797
Green feed . . . . .	24,805	30,234	32,577	35,369	29,743
Industrial crops—					
Cotton, unginned . . . . .	12,468	19,675	20,753	18,979	14,015
Hops . . . . .	2,531	3,211	3,788	3,588	3,133
Sugar cane . . . . .	138,431	138,409	158,716	151,213	176,548
Tobacco (dried leaf) . . . . .	29,782	27,919	38,528	38,930	42,528
Vegetables for human consumption—					
Onions . . . . .	6,044	7,167	6,366	6,692	7,768
Potatoes . . . . .	41,233	51,985	43,399	40,575	57,181
Other vegetables for human consumption . . . . .	82,387	85,417	88,421	92,955	104,104
Grapes . . . . .	50,173	47,750	44,602	58,712	46,363
Fruit and nuts . . . . .	162,918	155,250	165,877	193,000	199,489
All other crops . . . . .	67,183	60,197	64,124	85,265	123,834
<b>Total . . . . .</b>	<b>1,639,273</b>	<b>1,268,812</b>	<b>1,717,057</b>	<b>1,511,662</b>	<b>1,530,793</b>

(a) Includes amounts paid as bounty, relief, etc.

Values of agricultural production in the various States and Territories are shown for 1970-71 in the following table. In computing the net value of production, no deduction has been made for the cost of maintenance of farm buildings and fences, nor for the depreciation of farm plant.

**GROSS, LOCAL AND NET VALUES OF AGRICULTURAL PRODUCTION**  
**STATES AND TERRITORIES, 1970-71**  
(<sup>\$</sup>000)

<i>State or Territory</i>	<i>Gross production valued at principal markets</i>	<i>Marketing costs</i>	<i>Local value of production</i>	<i>Value of materials used in process of production</i>	<i>Net value of production (a)</i>
New South Wales . . . . .	426,311	104,575	321,736	(b)36,774	284,962
Victoria . . . . .	270,130	39,756	280,374	22,761	207,613
Queensland . . . . .	364,269	41,791	322,478	60,495	261,982
South Australia . . . . .	166,351	21,763	144,587	23,431	121,156
Western Australia . . . . .	262,391	47,349	215,041	39,210	175,831
Tasmania . . . . .	40,148	10,995	29,153	6,095	23,058
Northern Territory . . . . .	690	n.a.	690	n.a.	690
Australian Capital Territory . . . . .	503	25	478	22	456
<b>Australia . . . . .</b>	<b>1,530,793</b>	<b>266,254</b>	<b>1,264,537</b>	<b>188,788</b>	<b>1,075,748</b>

(a) No deduction has been made for depreciation and maintenance.  
power, power kerosene, petrol and other oils.

(b) No allowance has been made for costs of

## Wheat

Wheat is grown on a large scale in all States except Tasmania, and is the most important crop in Australia in terms of area, production and exports. The present limits of the wheat belt have been established after considerable fluctuation over the last four decades. In January 1934 a Royal Commission was appointed to inquire into and report upon the economic condition of the growing, handling and marketing of wheat, and the manufacturing, distributing and selling of flour and bread. The Report of this Royal Commission provides an authoritative description of all aspects of the industry up to that time.

### Wheat marketing and research

Two of the aspects of government and semi-government assistance and control which have contributed to the development of the industry are the organisation of overseas marketing and of research.

As a large proportion of the Australian wheat crop is normally exported, the marketing of wheat plays an important part in the industry. The Australian Wheat Board was constituted in September 1939, under National Security (Wheat Acquisition) Regulations, to purchase, sell, or dispose of wheat or wheat products, and to manage and control all matters connected with the handling, storage, protection, shipment, etc. of wheat acquired, and such other matters as were necessary to give effect to the regulations. Details of the operations of the Australian Wheat Board and the Wheat Stabilization Board in licensing wheat grown during the seasons 1941-42 to 1948-49 will be found in Year Book No. 38, pages 940-1, and a detailed survey of legislation relating to stabilisation of the wheat industry, including controls exercised during the 1914-18 and 1939-45 Wars and legislation establishing the Wheat Industry Stabilization Plan in 1948, is given in the Appendix to Year Book No. 37, pages 1295-9.

The Wheat Industry Stabilization Board ceased to function on 31 December 1948, and under the *Wheat Industry Stabilization Act* 1948 the Australian Wheat Board was reconstituted to administer the first stabilisation plan and was given powers similar to those held under the National Security Regulations. The new Board commenced to function on 18 December 1948. The Board has been continued in existence by the *Wheat Industry Stabilization Acts* 1954, 1958, 1963-66 and 1968-70 for the purpose of administering the second, third, fourth and fifth five year stabilisation plans. Details of the more recent plans were published in Year Book No. 40, pages 841 and 842 (1947-48 to 1952-53 Plan), No. 44, page 861 (1953-54 to 1957-58), No. 48, pages 903 and 904 (1958-59 to 1962-63) and No. 54, pages 868 and 869 (1963-64 to 1967-68).

*Fifth Post-war Wheat Industry Stabilisation Plan.* Following negotiations during 1968, the fifth post-war Wheat Industry Stabilisation Plan was enacted by the Commonwealth and States towards the end of 1968. The new plan operates on very much the same lines as the previous ones. However, there are some important changes in detail in the main features of the plan which are set out below.

The plan is to operate for five years. It commenced with the 1968-69 wheat crop and will end with the marketing of the 1972-73 crop.

The *Wheat Export Charge Act* 1968 repealed the *Wheat Export Charge Act* 1963 and provided for an export charge on wheat and wheat products for the seasons 1968-69 to 1972-73 inclusive. The charge which may be levied is the excess of the average export return over the sum of the guaranteed price (*see below*) and five cents per bushel with a maximum charge of fifteen cents per bushel. The ceiling on the Wheat Prices Stabilisation Fund, into which this charge is paid, has been raised from \$60 million to \$80 million. Any excess beyond this figure is returned to growers on a 'first in, first out' basis.

Payments from the Wheat Prices Stabilisation Fund will be paid to the Australian Wheat Board when required, for the purpose of building up the average export price for any season to the guaranteed price. When the average export realisations fall below the guaranteed price the deficiency is made up first by drawing upon the Stabilisation Fund in respect of up to 200 million bushels of wheat from each crop. If the Fund is exhausted, the necessary deficiency payments will be made from the Commonwealth Government's Consolidated Revenue Fund. As the return from exports has been below the guaranteed price, there have been no collections of the wheat export charge since the 1956-57 No. 20 Pool when \$3,178,000 was collected. In fact, grower's money in the Fund was exhausted with the closure of the 1959-60 Pool, and since then the Commonwealth has been obliged to meet its commitment in respect of the export guarantee. Up to the payment on the 1969-70 Pool this has involved an amount totalling \$212 million.

The Commonwealth has guaranteed a price to growers applying to 200 million bushels of wheat exported from each crop during the period of the plan. The guaranteed price is subject to adjustment in each year of the plan in accordance with changes in price of cash costs, rail freights and handling

and storage charges. There will no longer be any adjustment for imputed costs such as interest on farmers' equity. The guaranteed price per bushel in the 1971-72 season is \$1.518 f.o.b. vessel, an increase of 4.3 cents on that of the previous season.

The Australian Wheat Board is retained as the sole constituted authority for the marketing of wheat within Australia and for the marketing of wheat and flour for export from Australia for the period of the plan.

Amending legislation, with effect from December 1969, gave the Australian Wheat Board discretionary power to sell wheat in Australia for purposes other than human consumption at prices below that set for human consumption but not less than the guaranteed price.

The home consumption price for 1971-72, the fourth year of the fifth plan, has been established at \$1.78 per bushel, bulk basis, f.o.r. ports for wheat for human consumption. Wheat for the manufacture of flour for industrial use is priced at \$1.49. The basic price for wheat for stock feed is \$1.60, however, any purchaser who undertakes to buy the whole of his wheat requirements for stock feed purposes from the Board throughout the year ending 30 November 1972 will be charged \$1.49 per bushel. These prices include a loading of 1.2 cents per bushel to cover the cost of transporting wheat from the mainland to Tasmania. There is provision in the plan for annual adjustments to be made to the home consumption price by the same amount as the guaranteed price is adjusted. The above prices are 4 cents per bushel higher than in 1970-71, except for the basic price of stock feed which rose by 5 cents per bushel. The 1970-71 prices included a loading of 1.2 cents per bushel to meet freight charges on wheat shipped to Tasmania.

### Wheat delivery quotas plan

In March 1969 the Australian Wheat Growers' Federation put forward proposals for the allotment of quotas on deliveries of wheat to the Australian Wheat Board. The Federation's proposals were mainly designed to bring marketable supplies of wheat more into line with available outlets, following the record 1968-69 harvest. The proposals became effective for the 1969-70 harvest. State governments have the responsibility, for Constitutional reasons, of implementing the quota plan within the States and each State has enacted the necessary enabling legislation. The period of operation of the legislation varies among the States.

Quotas are subject to annual review. Wheat in excess of a quota may be received from a grower if storage space is available but 'quota wheat' will receive preference as far as receipt and subsequent sale by the Australian Wheat Board is concerned.

State quotas effective for the 1969-70 to 1971-72 seasons and those proposed by the Federation and agreed to by all parties for 1972-73 are given below:

Quota	1969-70 mil. bus	1970-71 mil. bus	1971-72 mil. bus	1972-73 mil. bus
<i>Basic and shortfall—</i>				
New South Wales . . . .	123	99	114	148
Victoria . . . . .	65	52	57	67
Queensland . . . . .	25	25	27	32
South Australia . . . .	45	36	40	46
Western Australia . . . .	86	83	76	95
<i>Total</i> . . . . .	<i>344</i>	<i>295</i>	<i>314</i>	<i>388</i>
<i>Additional—</i>				
New South Wales—				
prime hard . . . . .	7	12	12	7
durum . . . . .	..	..	2	2
Queensland—				
prime hard . . . . .	6	11	11	6
South Australia—				
southern hard . . . . .	..	..	..	4
<i>Total</i> . . . . .	<i>13</i>	<i>23</i>	<i>25</i>	<i>19</i>
<b>Grand total</b> . . . . .	<b>357</b>	<b>318</b>	<b>339</b>	<b>407</b>



Deliveries made within the quotas established receive a first advance payment. This has been \$1.10 per bushel for f.a.q. bulk wheat, f.o.r. ports basis for a number of years. The same arrangement will apply to 1972-73 season's quota wheat. In addition, the quota plan provides that wheat received which is declared by the Australian Wheat Board to have been sold and paid for within the season will be treated as quota wheat of the season and receive a first advance payment.

The States are responsible for determining the method of allocation of individual quotas within their respective boundaries. The bases of quota allocation vary from State to State, but in the main, quotas are based on a farm's average deliveries over a recent period.

### Wheat standards

A description of the F.A.Q. (fair average quality) standard of wheat is given in issues of the Year Book up to No. 53 (*see*, for example No. 53 page 902). However, over recent years there has been an extension of the system and Australian wheat is now marketed under eleven main different and distinct classifications. Each reflects the climatic and growing characteristics of its region of origin and also the particular characteristics of the varieties of wheat cultivated.

For each classification, samples of wheat are obtained each year and are mixed to give a representative sample of that grade. From these samples, which are representative of all the wheat of a particular classification grown in that region, standards for each grade are established; the bushel weight is determined by the use of the Schopper 1-litre scale chondrometer. This standard is used as the basis for sales of each grade and varies from year to year and from State to State. The eleven main different classifications of wheat are:

Queensland prime hard	Victorian F.A.Q.
New South Wales prime hard	South Australian F.A.Q.
South Australian southern hard	Western Australian F.A.Q.
Queensland F.A.Q.	Western Australian soft
New South Wales northern hard	Victoria soft
New South Wales southern-western F.A.Q.	

The several F.A.Q. grades, while possessing some characteristics in common, vary in protein content, milling characteristics, and dough qualities, and all are distinct grades. Similarly, the prime hard, hard and soft grades are individual grades segregated on the basis of specific quality characteristics.

Australia currently produces a full range of wheats for all purposes from high protein hard wheats to low protein soft wheats.

### Bulk handling and storage of wheat

A detailed description of the bulk handling system, including its advantages and disadvantages compared with other methods of handling, appears on pages 954-8 of Year Book No. 39.

New South Wales, Victoria and Western Australia have operated bulk handling systems for a number of years, and in more recent years other States have also introduced bulk systems. The bodies concerned with the administration of bulk handling in the various States are: Grain Elevators Board of New South Wales, Victorian Grain Elevators Board, State Wheat Board (Queensland), South Australian Co-operative Bulk Handling Ltd, Co-operative Bulk Handling Ltd (Western Australia), and the Tasmanian Grain Elevators Board.

### WHEAT: TOTAL CAPACITY OF BULK HANDLING FACILITIES<sup>(a)</sup> STATES, 30 NOVEMBER 1967 TO 1971

(Source: Bulk handling authorities in the various States. *see* above)  
(<sup>0</sup>000 bushels)

State	1967	1968	1969	1970	1971
New South Wales . . . . .	(b)132,792	184,972	212,600	234,000	211,747
Victoria(c) . . . . .	105,514	108,090	130,000	132,340	142,723
Queensland . . . . .	24,987	30,600	34,800	36,200	41,500
South Australia . . . . .	58,362	73,050	(d)95,486	(d)94,876	(d)93,896
Western Australia . . . . .	144,487	159,677	183,787	203,000	215,000
Tasmania . . . . .	1,060	1,060	1,060	1,060	1,060
<b>Australia . . . . .</b>	<b>467,202</b>	<b>557,449</b>	<b>657,733</b>	<b>701,476</b>	<b>705,926</b>

(a) Includes terminals, sub-terminals, country installations, and temporary storage. (b) Storage at beginning of season. (c) Includes storage in southern New South Wales operated by the Victorian Grain Elevators Board. (d) Includes current contracts.



Particulars of the operation of the bulk handling and storage systems in each State are set out on pages 916 and 917 of Year Book No. 48.

### International Wheat Agreement

Details of the first and second International Wheat Agreements operative from 1 August 1949 to 31 July 1953, and from 1 August 1953 to 31 July 1956, respectively, were published in Year Book No. 42 (see pages 840-1) or previous issues. Details of the third, fourth and fifth International Wheat Agreements which covered the periods from 1 August 1956 to 31 July 1959, 1 August 1959 to 31 July 1962 and 1 August 1962 to 31 July 1968 were published in Year Books 43 (page 836), 48 (page 906) and 55 (page 836) respectively.

### International Grains Arrangement

In August 1967 agreement was reached on a new International Grains Arrangement to operate for a period of three years from 1 July 1968. Details of the Arrangement were published in Year Book No. 55 (see page 836).

A new three year International Wheat Agreement came into effect on 1 July 1971. Like the International Grains Arrangement it covers a Wheat Trade Convention and a Food Aid Convention. The Wheat Trade Convention differs markedly from its 1968 predecessor in that it does not establish any maximum or minimum price provisions.

### Research into the wheat industry

Details of research into the Wheat Industry were published in Year Book No. 55 and previous issues. To the end of June 1971, the Wheat Industry Research Council (set up by the Commonwealth Government) and the Wheat Industry Research Committees (set up in the wheat-growing States) had spent \$16,970,000 including grants to the Commonwealth Scientific and Industrial Research Organization, State Departments of Agriculture, universities and agricultural colleges.

### Wheat farms: number and classification by activity

Particulars of the number of farms growing twenty acres and upwards of wheat for grain during each of the years 1966-67 to 1970-71 are shown in the following table. A farm worked on the share system or as a partnership is included as one holding only.

NUMBER OF FARMS GROWING TWENTY ACRES AND UPWARDS  
OF WHEAT FOR GRAIN: STATES AND A.C.T., 1966-67 TO 1970-71

State or Territory	1966-67	1967-68	1968-69	1969-70	1970-71
New South Wales . . . . .	19,575	20,619	21,340	20,608	18,537
Victoria . . . . .	11,202	11,056	11,722	11,618	9,669
Queensland . . . . .	5,674	5,867	6,063	4,982	2,816
South Australia . . . . .	9,419	8,905	9,884	9,529	8,548
Western Australia . . . . .	8,897	8,746	8,964	8,922	8,677
Tasmania . . . . .	194	159	239	203	403
Australian Capital Territory . . . . .	25	20	27	16	9
<b>Australia . . . . .</b>	<b>54,986</b>	<b>55,372</b>	<b>58,239</b>	<b>55,878</b>	<b>48,659</b>

There is in Australia a widespread combination of wheat growing with other rural activities. This is illustrated, for all States and for Australia, in respect of the 1968-69 season, in a series of statistical bulletins *Classification of Rural Holdings by Size and type of Activity*, 1968-69, Nos 1 to 7. These publications also contain details of numbers of rural holdings classified according to area of wheat for grain.

### Varieties of wheat sown

The breeding of wheat suitable to local conditions has long been established in Australia. Farrer (1845-1905) did invaluable work in pioneering this field, and the results of his labour and the continued efforts of those who have followed him have proved of immense benefit to the industry. Their efforts have resulted in the development of disease-resistant varieties, better average yields, and a greater uniformity of sample, with which have accrued certain marketing advantages as well as an improvement in the quality of wheat grown. More than 1,000 different varieties of Australian wheats have been catalogued by the Commonwealth Scientific and Industrial Research Organization, but the number of principal varieties grown in any one season is restricted to about forty-five.

The principal varieties of wheat sown and the percentage of each to the total area sown in the five main wheat-producing States of Australia in 1970-71 were as follows: New South Wales, Heron (19.1), Timgalen (15.7), Olympic (10.9); Victoria, Insignia (35.0), Olympic (19.4), Heron (11.3); Queensland, Mendos (32.2), Timgalen (22.9), Gamut (15.6); South Australia, Heron (37.6), Insignia (including Insignia 49) (16.5); and Western Australia, Gamanya (54.5), Falcon (14.0), Insignia (9.2). A detailed table of wheat varieties sown appears in the annual bulletin *The Wheat Industry* (see No. 120, published in May 1972.)

#### Wheat area, production and yield per acre

Prominent factors in the early development of the wheat industry were the increase in population following the discovery of gold and the redistribution of labour after the surface gold had been won. The economic depression of 1893 interrupted its progress, but its subsequent recovery was assisted by the invention of mechanical appliances, the use of superphosphate as an aid to production, and the introduction of new and more suitable varieties of wheat for Australian conditions. The establishment of closer settlement schemes and the settling of returned soldiers and others on the land were additional factors in its expansion.

#### WHEAT FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE STATES AND AUSTRALIAN CAPITAL TERRITORY, 1966-67 TO 1970-71

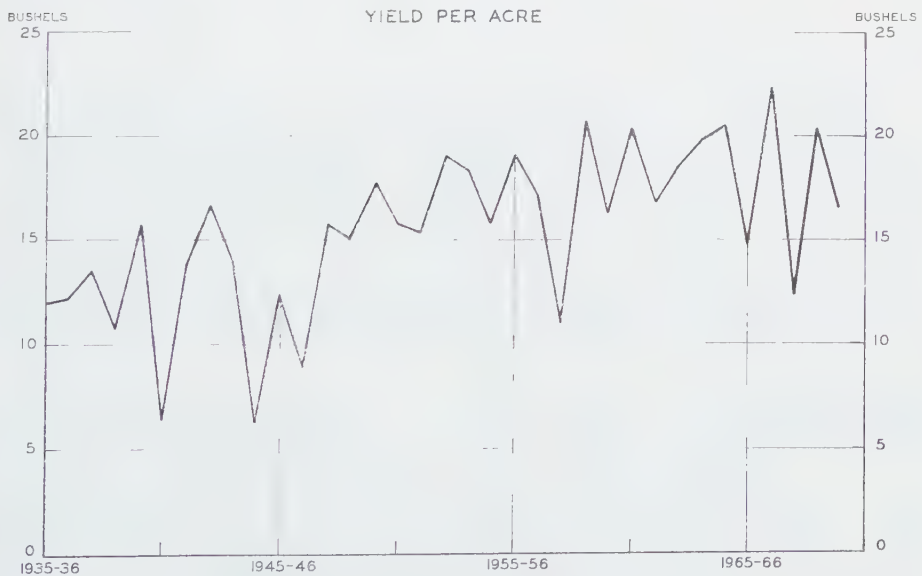
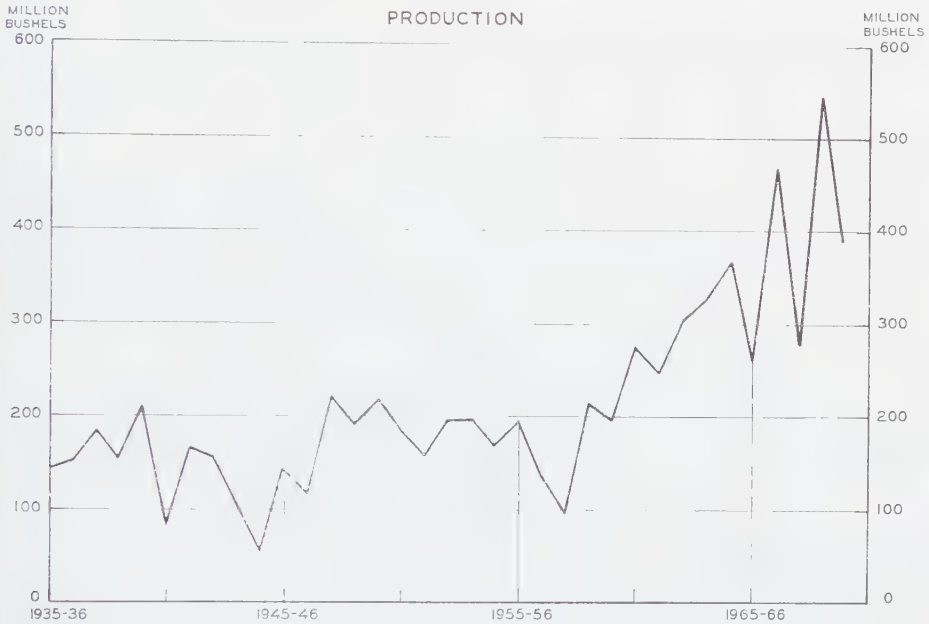
Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES)								
1966-67	7,135	3,138	1,227	2,960	6,347	13	3	20,823
1967-68	8,215	3,224	1,477	2,864	6,647	12	2	22,441
1968-69	9,962	3,984	1,789	3,748	7,295	17	4	26,799
1969-70	8,623	3,298	1,504	3,210	6,788	15	3	23,440
1970-71	5,475	1,879	825	1,983	5,835	11	1	16,009
PRODUCTION ('000 BUSHEL)(a)								
1966-67	202,501	70,896	35,730	53,816	103,195	385	87	466,610
1967-68	87,323	28,317	27,417	26,899	106,975	316	42	277,289
1968-69	215,119	90,728	42,000	83,160	112,450	410	84	543,950
1969-70	162,786	83,544	14,898	59,159	66,700	353	73	387,512
1970-71	110,604	36,901	4,401	29,028	108,650	283	28	289,895
YIELD PER ACRE (BUSHEL)(a)								
1966-67	28.4	22.6	29.1	18.2	16.3	30.2	32.5	22.4
1967-68	10.6	8.8	18.6	9.4	16.1	26.3	17.8	12.4
1968-69	21.6	22.8	23.5	22.2	15.4	23.6	20.1	20.3
1969-70	18.9	25.3	9.9	18.4	9.8	23.9	27.0	16.5
1970-71	20.2	19.6	5.3	14.6	18.6	25.5	23.4	18.1

(a) 60 lb per bushel.

A graph showing the area sown to wheat for grain in Australia since 1900-01 appears on plate 39 of this Year Book, and a map showing the distribution of areas growing wheat for grain throughout Australia in 1962-63 appears on page 1013 of Year Book No. 50. Similar maps showing the distribution of wheat areas in 1924-25, 1938-39, 1947-48, and 1954-55 appeared respectively in Year Books No. 22, page 695, No. 34, page 451, No. 39, pages 977-8, and No. 43, page 833.

The size of the wheat harvest in Australia is determined largely by the nature of the season, resulting in considerable year-to-year fluctuations in production. The main wheat-producing States of Australia are New South Wales, Western Australia and Victoria. Tasmania imports wheat from the mainland to satisfy its needs, though it exports flour made from local wheat which is particularly suitable for biscuits. The production of wheat and the yield per acre from 1935-36 is shown in Plate 40, page 755.

# WHEAT FOR GRAIN: AUSTRALIA 1935-36 TO 1970-71



### Price of wheat

The prices charged, per bushel, by the Australian Wheat Board for wheat sold for human consumption in Australia and for wheat sold as stock feed were as follows: year ended 30 November 1968, \$1.66; 1969, \$1.71; 1970, \$1.725; 1971, \$1.74 for wheat to millers, and \$1.45 to \$1.55 for wheat sold for stock feed; 1972, \$1.78 for wheat to millers and \$1.49 to \$1.60 for wheat for stock feed. These prices include a loading to meet freight charges incurred on wheat shipped to Tasmania (1.5 cents in 1967 and 1968; 1.0 cents in 1969, 1.6 cents in 1970; 1.5 cents in 1971 and 1.2 cents in 1972).

The Wheat Board's monthly basic export selling prices for f.a.q. bulk wheat f.o.b. basis fell in the following ranges; season ended 30 June 1967, \$1.51 to \$1.60; 1968, \$1.41 to \$1.49; 1969, \$1.38 to \$1.43; 1970, \$1.28 to \$1.39.

*International Wheat Agreements, 1949-53 to 1962-68.* As indicated on page 753 full details of the five International Wheat Agreements covering the years 1949-53, 1953-56, 1956-59, 1959-62 and 1962-68 have been given in previous issues of the Year Book.

*International Grains Agreement.* In August 1967 agreement was reached on a new International Grains Arrangement to operate for a period of three years from 1 July 1968. The new arrangement consisted of two legal instruments, the Wheat Trade Convention and the Food Aid Convention. For further details see Year Book No. 57, page 758.

*International Wheat Agreement, 1971.* The new International Wheat Agreement came into force in 1 July 1971. It has a life of three years. The form of the 1967 International Grains Arrangement has been continued and the new Agreement comprises two separate legal instruments, namely the Wheat Trade Convention and the Food Aid Convention.

The new Wheat Trade Convention ensures that the machinery for consultation and co-operation on wheat marketing existing under earlier Agreements will be maintained. The administrative body, the International Wheat Council, continues in existence. The Convention provides for the continuation of the full reporting and recording of all commercial and concessional transactions in wheat and flour.

The 1971 Wheat Trade Convention differs in an important aspect from earlier agreements in that it contains no specific pricing provisions, but the agreement specifically provides that when prices and related rights and obligations are judged capable of successful negotiation, the International Wheat Council shall arrange a further conference with the objective of bringing them into effect. In addition, a newly established Advisory Sub-Committee on Market Conditions will keep the wheat market under continuous review. This Sub-Committee will report to the Executive Committee of the Council if it considers that a situation of market instability has arisen, or threatens to arise. The Executive Committee will then review the situation and try to find mutually acceptable solutions.

With the entry of U.S.S.R. and Brazil, which were not members of the 1967 International Grains Agreement, all major wheat trading nations except the Republic of China (mainland) participate in the Wheat Trade Convention.

The new Food Aid Convention is basically unchanged from the previous arrangement. Under this Convention a number of developed countries, importers and exporters alike, will continue to provide developing countries with food aid in the form of grains or flour for human consumption. Australia's contribution will remain unchanged at 225,000 tons annually (8,267,000 bushels of wheat). Since the new convention has fewer members and total annual contributions have fallen from 4,259,000 metric tons to 3,974,000 metric tons, Australia's share has risen marginally to some 5.6 per cent.

Several minor changes have been incorporated in the new Food Aid Convention. A new clause provides that in exceptional cases, and on request, limited quantities of rice may be included in the programme. Also, sales on credit terms of 20 years or more will be eligible to be counted against aid commitments provided that maximum use is made of the other eligible forms of aid such as grants and sales for non-transferable local currency.

### Value of the wheat crop

The estimated gross value of the wheat crop in each State and in Australia during the season 1970-71 and the value per acre are shown below.

WHEAT FOR GRAIN: VALUE OF CROP(a), STATES, 1970-71

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.(b)
Aggregate value	\$'000	156,862	51,127	5,890	41,988	158,033	350	414,292
Value per acre	\$	28.65	27.21	7.14	21.18	27.09	31.63	25.88

(a) Gross value of total crop, including wheat used for seed and for stock feed on farms. Also includes payment of \$27,538,000 by the Commonwealth Government. (b) Includes the Australian Capital Territory.



**Production and disposal of wheat in Australia**

In the following tables details are given of Australian Wheat Board transactions and of total production and disposal of wheat during each of the years ended 30 November 1967 to 1971.

**AUSTRALIAN WHEAT BOARD**  
**WHEAT RECEIVED, STATES, 1966-67 TO 1970-71 HARVESTS**  
('000 bushels)

Harvest	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1966-67.	184,644	74,607	32,884	50,007	96,823	247	439,212
1967-68.	73,005	27,814	24,367	22,084	99,946	154	247,369
1968-69.	196,828	94,673	38,798	79,447	105,679	210	515,635
1969-70.	145,709	85,883	11,975	55,693	58,702	181	358,143
1970-71.	93,862	32,856	3,313	25,023	99,653	122	254,829

Stocks of wheat (including flour in terms of wheat) held by the Australian Wheat Board in each State at 30 November for the years 1967 to 1971 are shown in the following table. These data relate to stocks held at mills, sidings, ports, and depots as recorded by the Australian Wheat Board.

**AUSTRALIAN WHEAT BOARD: STOCKS<sup>(a)</sup> OF WHEAT (INCLUDING FLOUR IN**  
**TERMS OF WHEAT), STATES, 30 NOVEMBER 1967 TO 1971**  
('000 bushels)<sup>(b)</sup>

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1967 . . .	43,238	22,709	596	8,160	5,285	536	80,524
1968 . . .	10,148	13,298	688	6,791	20,580	353	51,858
1969 . . .	84,660	61,897	6,802	46,093	66,731	570	266,752
1970 . . .	98,686	77,927	2,620	45,534	44,381	614	269,761
1971 . . .	55,220	24,029	86	15,784	29,330	491	124,940

(a) Held at mills, sidings, ports and depots. Excludes new season's wheat received from growers prior to 30 November of years shown. (b) One short ton (2,000 lb) of flour is taken as being equivalent to 46.3 bushels of wheat.

Particulars of the disposal of wheat during the years ended 30 November 1967 to 1971 are shown in the following table.

**WHEAT: PRODUCTION AND DISPOSAL, AUSTRALIA, 1967 TO 1971**  
(million bushels)<sup>(a)</sup>

	Year ended 30 November—				
	1967	1968	1969	1970	1971
Opening stocks (including flour) <sup>(b)(c)(d)</sup>	16.5	80.5	51.9	266.8	269.8
Production . . . . .	466.6	277.3	544.0	387.5	289.9
<b>Total available supplies . . . . .</b>	<b>483.1</b>	<b>357.8</b>	<b>595.9</b>	<b>654.3</b>	<b>559.7</b>
Exports—					
Wheat . . . . .	293.1	187.7	219.0	278.1	315.8
Flour <sup>(b)</sup> . . . . .	19.7	19.1	15.0	16.7	14.5
Breakfast foods and other products <sup>(b)(d)</sup>	0.9	1.0	1.9	2.2	2.9
Local consumption—					
Flour <sup>(b)(d)</sup> . . . . .	43.8	45.0	44.5	45.4	45.8
Breakfast foods and other products <sup>(b)(d)</sup>	1.8	2.4	1.7	1.4	1.4
Stock feed wheat sales <sup>(d)</sup> . . . . .	15.6	22.6	9.8	11.8	14.5
Seed . . . . .	20.9	24.5	21.7	14.3	16.3
Balance retained on farm (for other than seed use)	6.5	5.4	6.7	14.8	18.8
Closing stocks (including flour) <sup>(b)(c)(d)</sup>	80.5	51.9	266.8	269.8	124.9
<b>Total disposals . . . . .</b>	<b>483.2</b>	<b>359.6</b>	<b>587.1</b>	<b>654.5</b>	<b>554.9</b>
Excess (+) or deficiency (–) of disposals in relation to available supplies <sup>(e)</sup>	+0.1	+1.8	–8.8	+0.2	–4.8

(a) One short ton (2,000 lb) of flour is taken as being equivalent to 46.3 bushels of wheat. (b) In terms of wheat. (c) Held at ports, depots, mills, and sidings. (d) Source: Australian Wheat Board. (e) Includes allowance for unrecorded movements in stocks, gain or loss in out-turn, etc., and in differences related to the timing of official export statistics.

The *Wheat Industry Stabilization Act* 1948 empowered the Minister to arrange with the Commonwealth Bank for advances to the Board, the advances being guaranteed by the Commonwealth Government. These provisions have been continued in the subsequent legislation, with the exception that advances are now arranged through the Reserve Bank.

### AUSTRALIAN WHEAT BOARD: FINANCIAL OPERATIONS, 1966-67 TO 1970-71

(\$'000)

	No. 30 Pool	67/68 Pool	68/69 Pool(a)	69/70 Pool(a)	70/71 Pool(a)
	(1966-67 Harvest)	(1967-68 Harvest)	(1968-69 Harvest)	(1969-70 Harvest)	(1970-71 Harvest)
Paid to growers . . . . .	542,965	321,719	546,484	329,919	321,607
Rail freight . . . . .	76,538	42,009	90,644	57,084	50,843
Expenses . . . . .	30,688	32,317	64,079	53,163	36,395
<b>Total payments . . . . .</b>	<b>650,191</b>	<b>396,045</b>	<b>701,207</b>	<b>440,166</b>	<b>408,845</b>
Value of sales delivered . . . . .	(b)635,781	(c)353,793	(d)673,488	(e)413,407	(f)374,049

(a) Incomplete. (b) Subject to additional \$15,508,000 provided by the Commonwealth Government and payment of \$1,098,000 to Wheat Industry Research Fund. (c) Subject to an additional \$42,870,000 provided by the Commonwealth Government and payment of \$618,000 to Wheat Industry Research Fund. (d) Subject to an additional \$29,008,000 provided by the Commonwealth Government and payment of \$1,289,000 to Wheat Industry Research Fund. (e) Subject to an additional \$27,538,000 to be provided by the Commonwealth Government and payment of \$779,000 to Wheat Industry Research Fund. (f) Subject to an estimated additional \$35,506,000 to be provided by the Commonwealth Government and payment of \$710,000 to the Wheat Industry Research Fund.

Details of earlier pools will be found in previous issues of the Year Book.

#### Imports of wheat

Wheat and flour have been imported in substantial quantities on three occasions since 1900; in 1902-3 the wheat harvest was only 12,378,000 bushels, and wheat and flour equivalent to 12,468,000 bushels of wheat were imported. An equivalent of 7,279,000 bushels was imported in 1914-15 to supplement the yield of 25 million bushels produced in that season. Owing to drought conditions in 1957-58 supplies of high protein wheat were insufficient for local requirements and, as a result, 1,485,000 bushels were imported from Canada in 1958. No wheat has since been imported.

#### Exports of wheat and flour

Statistics in the following three tables are for years ended 30 June and relate to the exports of *Australian produce* only.

### WHEAT AND FLOUR: EXPORTS, AUSTRALIA, 1966-67 TO 1970-71

Year	Quantity				Value		
	Wheat	Flour(a)		Total (in terms of wheat)	Wheat	Flour(a)	Total
		As flour	In terms of wheat(b)				
	'000 bushels	short tons	'000 bushels	'000 bushels	\$'000 f.o.b.	\$'000 f.o.b.	\$'000 f.o.b.
1966-67 . . . . .	239,051	379,352	17,564	256,615	361,227	24,600	385,827
1967-68 . . . . .	238,778	406,847	18,837	257,613	342,767	25,303	368,070
1968-69 . . . . .	179,707	379,267	17,560	197,267	258,334	23,822	282,156
1969-70 . . . . .	253,019	355,932	16,480	269,499	337,570	23,011	360,581
1970-71 . . . . .	333,445	313,608	14,520	347,965	433,599	21,374	454,973

(a) White flour (plain and self-raising), sharps and wheatmeal for baking. taken as being equivalent to 46.3 bushels of wheat.

(b) One short ton (2,000 lb) of flour is

**WHEAT: EXPORTS TO VARIOUS COUNTRIES, AUSTRALIA, 1966-67 TO 1970-71**  
(<sup>0</sup>000 bushels)

<i>Country to which exported</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
Chile . . . . .	1,725	6,271	3,849	2,912	6,727
China, Republic of (mainland) . . . . .	79,523	88,781	43,431	92,489	48,139
Iran . . . . .	2,078	276	..	18	10,846
Iraq . . . . .	4,902	7,221	..	2,046	16,038
Japan . . . . .	15,851	22,484	42,149	37,261	30,167
Malaysia . . . . .	9,244	9,374	9,299	10,403	11,476
Pakistan . . . . .	25,863	1,148	865	5,496	5,843
Peru . . . . .	848	3,041	5,668	5,514	5,780
Singapore . . . . .	7,403	9,291	3,924	7,674	10,191
Sudan . . . . .	..	1,373	..	3,280	8,482
United Arab Republic . . . . .	1,895	..	..	..	48,236
United Kingdom . . . . .	14,233	23,622	28,412	37,644	64,102
Other(a) . . . . .	75,486	65,896	42,110	48,282	67,418
<b>Total . . . . .</b>	<b>239,051</b>	<b>238,778</b>	<b>179,707</b>	<b>253,019</b>	<b>333,445</b>

(a) Includes particulars of shipments made 'for orders' which could not be classified to countries.

The following table shows the exports of flour to various countries for each of the years 1966-67 to 1970-71. The figures relate to exports of white flour (plain and self-raising), sharps and wheatmeal for baking.

**FLOUR(a): EXPORTS TO VARIOUS COUNTRIES, AUSTRALIA, 1966-67 TO 1970-71**  
(Short tons)

<i>Country to which exported</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
Ceylon . . . . .	144,982	160,620	143,005	98,320	93,717
Fiji . . . . .	24,642	33,735	35,323	34,626	37,072
Indonesia . . . . .	24,766	65,564	58,595	69,413	56,288
Libya . . . . .	1,504	1,036	8,488	11,581	14,964
Malawi . . . . .	7,413	10,483	6,464	8,958	12,009
Mauritius . . . . .	12,147	17,372	17,004	20,177	14,928
Oman . . . . .	5,255	5,587	5,800	6,183	5,211
Papua New Guinea . . . . .	16,139	17,804	18,158	20,373	23,596
Qatar . . . . .	3,125	4,469	4,436	5,716	6,477
Saudi Arabia . . . . .	12,111	17,183	15,019	7,923	11,651
Trucial States . . . . .	8,489	12,207	10,840	16,413	19,921
United Kingdom . . . . .	19,411	11,090	9,156	7,628	7,450
Other(b) . . . . .	99,368	49,697	46,979	48,621	10,324
<b>Total . . . . .</b>	<b>379,352</b>	<b>406,847</b>	<b>379,267</b>	<b>355,932</b>	<b>313,608</b>

(a) One short ton (2,000 lb) of flour is taken as being equivalent to 46.3 bushels of wheat. (b) Includes particulars of shipments made 'for orders' which could not be classified to countries.

**World area and production of wheat**

The figures in the following table of the world area and production of wheat by principal countries and by continents have been compiled from statistics published by the International Wheat Council. Harvests in the northern hemisphere occur in the first of the two years mentioned in each column heading, and in the southern hemisphere at the end of that year and the beginning of the next. Harvests of the northern hemisphere countries are thus combined with those of the southern hemisphere which immediately follow; e.g. in 1970-71 the Canadian harvest occurred from August to September 1970 and the Australian harvest from October 1970 to February 1971.

**WHEAT: AREA, PRODUCTION AND YIELD PER ACRE IN VARIOUS COUNTRIES  
1968-69 TO 1970-71**

*(Source for countries other than Australia: International Wheat Council—World Wheat Statistics)*

Continent and country	Area			Production			Yield per acre		
	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
	'000 acres	'000 acres	'000 acres	mil. bus	mil. bus	mil. bus	bus	bus	bus
Africa . . . . .	21,535	20,930	23,278	294	247	223	13.6	11.8	12.9
Asia—									
China (mainland)(a) . . . . .	61,776	58,070	58,318	772	819	626	12.5	14.1	14.4
India . . . . .	37,061	39,433	41,084	608	685	547	16.4	17.4	18.0
Pakistan . . . . .	14,977	15,511	15,689	238	247	201	15.9	15.9	17.4
Turkey . . . . .	20,270	20,386	21,395	353	386	272	17.4	18.9	17.2
Total Asia(b) . . . . .	164,003	164,103	163,710	2,429	2,563	1,926	14.8	15.6	15.6
Europe—									
France . . . . .	10,107	9,998	9,294	551	534	352	54.5	53.4	51.1
Germany, Federal Re- public of . . . . .	3,618	3,692	3,689	228	221	154	63.0	59.7	56.4
Italy . . . . .	10,576	10,420	10,225	355	351	262	33.5	33.6	34.6
Spain . . . . .	9,761	9,153	9,188	195	167	110	20.0	18.3	16.1
Total Europe(b) . . . . .	70,264	69,499	67,174	2,660	2,573	1,812	37.9	37.0	36.4
North and Central America—									
Canada . . . . .	29,422	24,968	12,484	650	684	245	22.1	27.4	26.6
United States . . . . .	55,262	47,555	44,307	1,576	1,459	1,021	28.5	30.7	31.1
Total North and Central America(b) . . . . .	86,610	74,428	58,948	2,293	2,224	1,326	26.5	29.9	30.3
Oceania—									
Australia . . . . .	26,799	23,440	16,009	544	388	290	20.3	16.5	18.1
Total Oceania(b) . . . . .	27,115	23,719	16,246	560	402	299	20.7	16.9	18.4
South America—									
Argentina . . . . .	14,423	12,810	8,187	211	250	116	14.6	19.5	19.0
Total South America(b) . . . . .	20,386	19,422	16,112	311	363	220	15.3	18.7	18.4
U.S.S.R. (Europe and Asia) . . . . .	166,128	163,830	161,115	3,432	3,013	2,712	20.7	18.4	22.7
World total(b) . . . . .	556,041	535,881	506,583	11,978	11,386	8,518	21.5	21.2	16.8

(a) International Wheat Council estimate. (b) Includes allowances for any missing data for countries shown and for other producing countries not shown.

### Principal wheat exporting and importing countries

The following table shows world exports of wheat and wheat flour (in terms of wheat) by the major wheat exporting countries, according to continents and countries of primary destination, based on statistics recently published by the International Wheat Council. While Australia's production of wheat has averaged about three per cent of the world's total during recent years, its exports account for a much higher proportion of the total quantities shipped. For the three years ended 1970-71 Australia's share of the world wheat exports has averaged 15 per cent.



# **WORLD EXPORTS OF WHEAT AND WHEAT FLOUR IN TERMS OF WHEAT 1966-67 TO 1970-71**

*(Source: International Wheat Council—World Wheat Statistics)*

*(Million bushels)*

Year and country of primary destination	Exporting country							Total
	Argentina	Australia	Canada	E.E.C.	U.S.A.	U.S.S.R.	Other	
1969-70—								
Africa—								
United Arab Republic . . . . .	..	48.6	16.2	31.5	0.6	11.5	4.1	112.5
Other . . . . .	2.1	23.1	23.0	35.1	58.4	1.8	3.3	146.9
Total Africa . . . . .	2.1	71.8	39.2	66.6	59.0	13.3	7.3	259.4
Asia(a)—								
China (mainland) . . . . .	..	45.7	86.2	0.1	..	..	..	132.1
India . . . . .	0.9	4.3	22.3	..	53.2	..	..	80.7
Japan . . . . .	..	31.5	37.8	..	105.7	..	..	175.1
Korea, Republic of . . . . .	..	1.9	..	..	61.9	..	..	63.8
Pakistan . . . . .	..	5.8	4.1	4.1	24.0	..	..	38.1
Other . . . . .	3.4	85.6	39.8	26.9	137.0	33.2	7.3	333.2
Total Asia . . . . .	4.3	174.9	190.2	31.2	381.8	33.2	7.3	822.8
Europe(a)—								
Czechoslovakia . . . . .	..	..	..	1.5	..	37.5	..	39.0
Germany, East . . . . .	..	6.1	..	..	..	55.1	0.4	61.6
Germany, Fed. Rep. of . . . . .	..	..	20.7	..	..	1.0	..	44.7
Italy . . . . .	19.4	1.0	11.9	..	17.1	0.8	..	50.2
Netherlands . . . . .	0.3	1.7	13.2	..	22.0	1.1	..	38.3
Poland . . . . .	..	..	3.0	..	..	69.4	..	72.5
United Kingdom . . . . .	0.1	63.6	62.0	5.6	44.9	4.3	6.2	186.6
Other . . . . .	1.5	10.8	25.2	3.6	73.0	30.6	4.3	149.1
Total Europe . . . . .	21.3	83.3	136.0	10.7	180.0	199.9	10.8	642.0
North and Central America	..	..	22.6	3.7	24.1	10.8	..	61.3
Oceania . . . . .	..	6.6	..	1.2	0.1	..	..	7.9
South America—								
Brazil . . . . .	22.8	..	14.0	..	29.8	..	0.7	67.4
Other . . . . .	14.0	13.1	10.3	1.3	53.5	2.6	..	94.8
Total South America . . . . .	36.8	19.7	46.9	6.2	107.5	13.4	0.7	231.4
U.S.S.R. . . . .	..	..	11.6	..	..	..	..	11.6
All other . . . . .	..	0.2	..	..	..	..	..	0.2
<b>World Total, 1970-71 . . . . .</b>	<b>64.6</b>	<b>349.8</b>	<b>423.9</b>	<b>114.7</b>	<b>728.3</b>	<b>259.9</b>	<b>26.2</b>	<b>1,967.3</b>
1969-70 . . . . .	73.7	266.4	325.3	262.1	605.5	216.3	90.2	1,839.6
1968-69 . . . . .	102.3	196.2	319.6	169.0	539.8	198.3	111.4	1,636.7
1967-68(b) . . . . .	50.3	257.6	327.1	206.1	742.1	186.8	143.6	1,913.7
1966-67(b) . . . . .	112.4	256.6	545.0	174.4	734.1	151.6	88.4	2,062.5

(a) Excludes U.S.S.R., details for which are shown separately.

(b) Includes European Economic Community intra-trade.

The above particulars are based on customs clearances of the exporting countries, and relate to years ended 30 June. There are small differences between Australian exports as shown and those on pages 758-9 due in part to the use by the International Wheat Council of a slightly different factor to convert flour to wheat equivalent.

## **Oats**

This cereal is widely grown in all agricultural areas which have autumn, winter and spring rainfall; it is tolerant of wet conditions and heavy soils. It has excellent feed value and produces a higher yielding crop than other winter cereals. It needs less cultivation, but requires ample fertiliser. Oats has a variety of uses—as a pasture plant when rough sown into stubble or heavy clover pastures, as silage if cut before maturity, as a hay crop when mown and baled or cut for chaff, or as a grain when stripped (the stubble then being grazed off). The grain is sold through voluntary pools in Victoria, South Australia and Western Australia. In 1971 State statutory marketing boards were set up in New South Wales and Victoria after a poll of growers, and are expected to commence marketing operations with the 1972-73 season.

Oats area, production and yield per acre

Oats is usually next in importance to wheat among the grain crops cultivated in Australia. However, while wheat grown for grain in 1970-71 accounted for 41 per cent of the area of all crops, oats grown for grain represented only 10 per cent.

OATS FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE  
STATES AND AUSTRALIAN CAPITAL TERRITORY, 1966-67 TO 1970-71

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES)								
1966-67	. . . 1,363	1,079	66	509	1,204	36	2	4,258
1967-68	. . . 907	723	31	525	1,158	35	1	3,380
1968-69	. . . 1,185	991	55	516	1,092	31	1	3,872
1969-70	. . . 903	884	75	372	1,139	22	1	3,396
1970-71	. . . 1,002	987	60	482	1,284	23	1	3,838
PRODUCTION ('000 BUSHEL)(a)								
1966-67	. . . 41,003	31,248	1,467	10,276	22,117	948	47	107,106
1967-68	. . . 8,235	6,859	450	3,299	19,759	1,014	12	39,628
1968-69	. . . 27,454	30,230	1,119	11,895	22,942	583	27	94,250
1969-70	. . . 19,238	25,927	950	6,665	15,463	455	25	68,723
1970-71	. . . 25,133	25,720	464	8,408	28,657	486	14	88,882
YIELD PER ACRE (BUSHEL)(a)								
1966-67	. . . 30.1	29.0	22.1	20.2	18.4	26.4	26.2	25.2
1967-68	. . . 9.1	9.5	14.6	6.3	17.1	28.7	20.3	11.7
1968-69	. . . 23.2	30.5	20.3	23.1	21.0	18.5	22.4	24.3
1969-70	. . . 21.3	29.3	12.6	17.9	13.6	20.5	28.1	20.2
1970-71	. . . 25.1	26.1	7.7	17.5	22.3	20.8	23.7	25.2

(a) 40 lb per bushel.

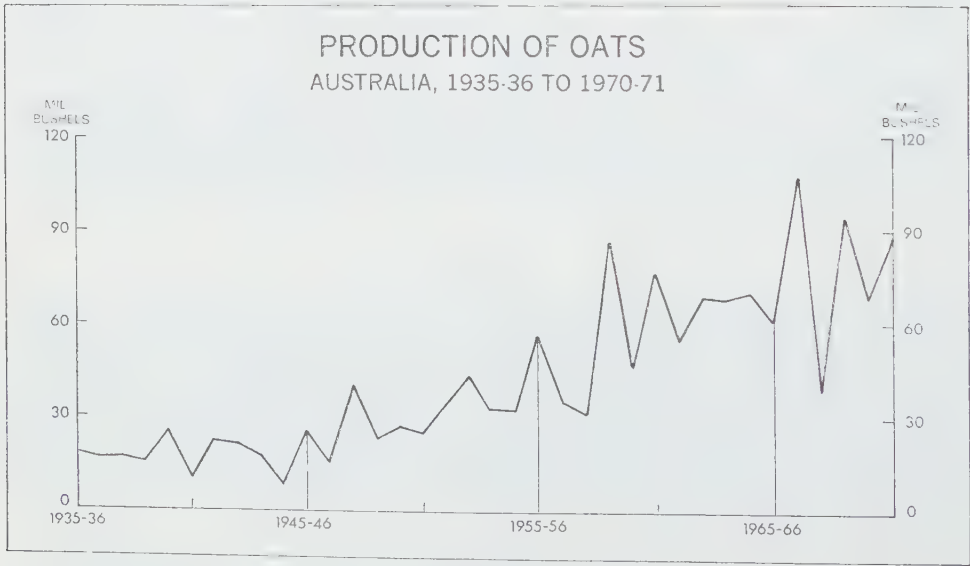


PLATE 41

Graphs showing the area sown to oats and production of oats in Australia appear on pages 993 and 995 of Year Book No. 49, and a map showing the distribution of areas growing oats for grain throughout Australia in 1962-63 appears on page 1015 of Year Book No. 50. The area sown to oats from 1900-01 is shown in plate 39, page 746 and the production of oats from 1935-36 is shown in plate 41, page 762.

Production of oats in 1970-71, 88,882,000 bushels was 6 per cent below the record production in 1966-67. Yield per acre was 25.2 bushels, which equalled the record yield per acre of 25.2 bushels in 1966-67.

#### Value of oat crop

The average wholesale price in the Melbourne market for oats of good milling quality was \$0.64 per bushel in 1970-71, compared with \$0.53 in 1969-70. The estimated gross value of the oat crop in each State for the 1970-71 season and the value per acre were as follows.

#### OATS FOR GRAIN: VALUE OF CROP, STATES, 1970-71

		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.(a)</i>
Aggregate value	\$'000	16,588	13,558	580	5,053	18,100	395	54,283
Value per acre	\$	16.56	13.74	9.61	10.49	14.10	16.93	14.14

(a) Includes the Australian Capital Territory.

#### Exports of oats

#### OATS: EXPORTS, AUSTRALIA, 1966-67 TO 1970-71

		<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
Quantity	'000 bus	22,134	10,033	18,373	12,086	30,640
Value	\$'000 f.o.b.	17,450	8,408	13,042	7,559	23,827

In 1970-71 the principal countries of destination were Japan (10,593,000 bushels), Italy (4,943,000 bushels), the Federal Republic of Germany (4,656,000 bushels) and the Netherlands (3,300,000 bushels).

#### World production of oats

The world production of oats for the year 1971, according to preliminary figures issued by the United States Department of Agriculture, amounted to 2,881 million bushels, harvested from 74.5 million acres, resulting in an average yield of 38.6 bushels an acre. This compared with an estimated production in the previous year of 2,772 million bushels from an area of 76.9 million acres and an average yield of 36.1 bushels an acre. The main producers are Canada, West Germany and Poland, with Australia producing about 3 per cent of the world total. On occasions in recent years Australia has been the world's largest exporter.

### Barley

This cereal contains two main groups of varieties, 2-row and 6-row. The former is generally, but not exclusively, preferred for malting purposes. Barley was formerly stubble-sown, but is now grown principally on pasture land worked up early in the year of sowing. In this way it forms an important phase in the rotation of crops. Like oats, it may also be sown for fodder production or for grain. When sown for fodder, sowing may take place either early or late in the season, as it has a short growing period. It may thus provide grazing or fodder supplies when other sources are not available. Barley grain may be crushed to meal for stock (especially pigs) or sold for malting.

Crops sown for malting purposes require well-worked, weed-free paddocks of even soil, and are thus restricted to specific districts. The main barley-growing areas in Australia are situated in South Australia (Murray-Mallee, Eyre and Yorke Peninsulas), but considerable quantities are grown also in New South Wales, Victoria, Queensland and Western Australia.

**Barley Boards**

The bulk of the barley crop in the various States is acquired and marketed by grower-controlled boards. Pooled returns from sales are distributed to growers at standard rates for the individual grades and varieties delivered. The Victorian and South Australian crops are marketed by the Australian Barley Board (a joint board established by the two State Governments), and the Queensland and Western Australian Barley Boards handle the crops of their respective States. A marketing board was established in New South Wales in 1971 after a poll of growers. Particulars of the proportion of barley production which was received by the Australian Barley Board (for Victoria and South Australia), together with details of quantity sold, advances and total payments to growers, are presented below.

**AUSTRALIAN BARLEY BOARD: BARLEY RECEIVED, SOLD, ETC.  
1966-67 TO 1970-71**

<i>Pool</i>	<i>Quantity received</i>	<i>Quantity sold(a)</i>	<i>Total advances per bushel(b)</i>	<i>Net payments to growers</i>
	'000 bushels	'000 bushels	\$	\$'000
No. 28 (1966-67 Crop) . . .	22,043	22,026	1.1940	22,759
„ 29 (1967-68 „ ) . . .	7,985	7,975	1.1912	7,511
„ 30 (1968-69 „ ) . . .	27,280	27,218	0.9681	21,765
„ 31 (1969-70 „ ) . . .	31,429	31,381	0.8490	21,191
„ 32 (1970-71 „ ) . . .	36,499	36,396	1.0600	(c)33,139

(a) Includes surplus of shortage in out-turn except for No. 32 Pool for which the sales are not yet complete. (b) 2-row No. 1 Grade (bulk) less freight. (c) As at 30 April 1972. At that date it was estimated that the amount still to be paid to growers was 3 cents per bushel.

**Barley area, production and yield per acre**

Since the imposition of wheat quotas for the 1969-70 season, the area of barley sown for grain has increased substantially. The area sown in 1970-71 was 4,942,000 acres, which was 31 per cent more than the previous record acreage of 3,759,000 acres in 1969-70. The production of barley for grain in 1970-71, 103,650,000 bushels, was a record and was 38 per cent more than the previous record production of 74,901,000 bushels in 1969-70. The area, production and yield per acre of barley for grain in the several States for the years 1966-67 to 1970-71 are shown in the following table. Separate details for 2-row and 6-row varieties are shown for all States for 1970-71.

**BARLEY FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE  
STATES AND AUSTRALIAN CAPITAL TERRITORY, 1966-67 TO 1970-71**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>	<i>Aust.</i>
AREA ('000 ACRES)								
1966-67 . . .	385	228	384	1,107	373	21	..	2,498
1967-68 . . .	367	305	342	1,157	416	24	..	2,611
1968-69 . . .	486	409	427	1,412	553	26	..	3,314
1969-70 . . .	542	487	417	1,384	900	30	..	3,759
1970-71—								
2-row . . .	472	640	203	1,659	781	30	..	3,785
6-row . . .	272	25	23	54	781	1	..	1,158
Total . . .	744	665	226	1,714	1,562	32	..	4,942



BARLEY FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE, STATES  
AND AUSTRALIAN CAPITAL TERRITORY, 1966-67 TO 1970-71—continued

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
PRODUCTION ('000 BUSHELS)(a)								
1966-67 . . .	11,796	5,421	13,194	23,698	6,707	772	..	61,588
1967-68 . . .	4,834	2,709	8,965	12,380	7,027	884	..	36,798
1968-69 . . .	11,212	8,885	12,869	29,551	9,187	884	..	72,588
1969-70 . . .	12,335	11,373	7,587	30,454	12,058	1,095	..	74,901
1970-71—								
2-row . . .	11,289	13,509	2,492	31,739	18,348	1,258	..	78,634
6-row . . .	7,648	529	212	999	15,574	55	..	25,016
Total . . .	18,937	14,038	2,704	32,738	33,922	1,312	..	103,650
YIELD PER ACRE (BUSHELS)(a)								
1966-67 . . .	30.6	23.8	34.4	21.4	18.0	36.7	..	24.7
1967-68 . . .	13.2	8.9	26.2	10.7	16.9	36.8	..	14.1
1968-69 . . .	23.1	21.7	30.1	20.9	16.6	33.7	..	21.9
1969-70 . . .	22.8	23.4	18.2	22.0	13.4	36.9	..	19.9
1970-71—								
2-row . . .	23.9	21.1	12.3	19.1	23.5	41.4	..	20.8
6-row . . .	28.1	21.0	9.2	18.4	19.9	37.6	..	21.6
Total . . .	25.4	21.1	12.0	19.1	21.7	41.2	..	21.0

(a) 50 lb per bushel.

For Australia, 77 per cent of the area of barley for grain in 1970-71 was sown with 2-row barley. The proportion, however, varied considerably in the several States. The utilisation of barley during the season ended November 1971 was as follows: exports, 54,293,000 bushels; pearl barley, 125,000 bushels; seed, 8,375,000 bushels. Statistics for malting and distilling utilisation are not available.

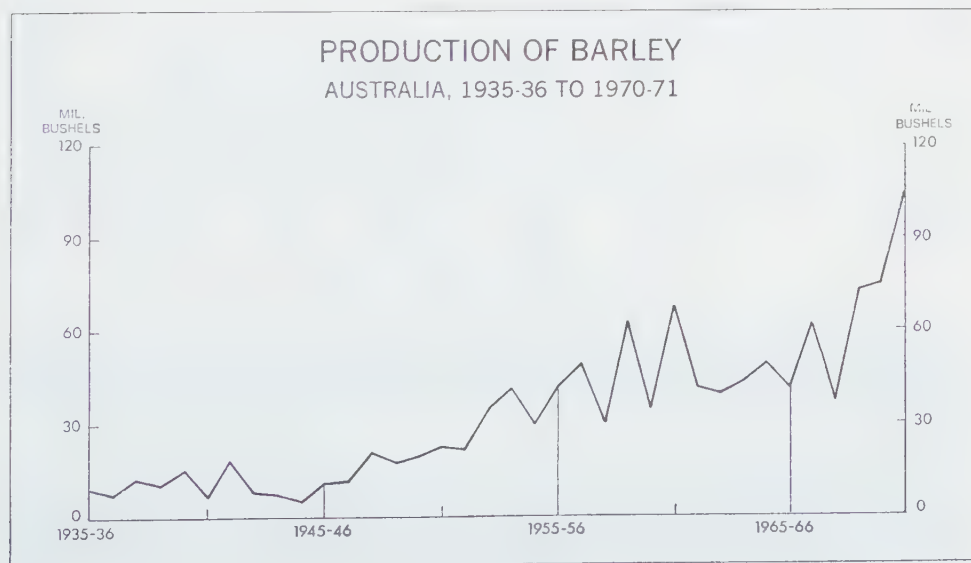


PLATE 42

The production of barley in Australia since 1935-36 is shown in plate 42, above and a map showing the distribution of barley growing areas throughout Australia in 1962-63 appears on page 1014 of Year Book No. 50. The area sown to barley from 1900-01 is shown in plate 39, page 746.

### Value of barley crop

The average wholesale price for 2-row English malting barley in the Melbourne market was \$1.43 per bushel in 1970-71 compared with \$1.44 in 1969-70. The estimated gross value of the barley crop in each State for the 1970-71 season and the value per acre are shown in the following table.

BARLEY FOR GRAIN: VALUE OF CROP, STATES, 1970-71

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Aggregate value	. \$'000	20,921	16,379	2,865	34,902	34,194	1,528	110,789
Value per acre	. \$	28.11	24.63	12.70	20.37	21.89	47.99	22.42

### Exports of barley

South Australia is the principal exporting State, and China, Republic of (Taiwan), the Federal Republic of Germany, Japan and the United Kingdom were the principal countries to which barley was shipped in 1970-71. Particulars of exports of Australian-produced barley for the years 1966-67 to 1970-71 are shown in the following table.

BARLEY: EXPORTS, AUSTRALIA, 1966-67 TO 1970-71

		1966-67	1967-68	1968-69	1969-70	1970-71
Quantity	. . . '000 bus	18,781	5,701	19,871	27,880	49,515
Value	. . . \$'000 f.o.b.	21,569	6,569	18,246	22,766	50,820

In addition to exports of barley grain, there are also exports of Australian pearl and Scotch barley, the total for 1970-71 amounting to 269,000 lb, valued at \$8,000, the main countries of consignment being Malaysia, Mauritius and Papua New Guinea.

### Barley malt

Details of the recorded usage of barley and the production of barley malt in the years 1966-67 to 1970-71 are given in the following table.

BARLEY MALT: GRAIN USED AND MALT PRODUCED, AUSTRALIA  
1966-67 TO 1970-71

		1966-67	1967-68	1968-69	1969-70	1970-71
Barley used	. . . '000 bus(a)	13,601	13,003	n.a.	n.a.	n.a.
Malt produced	. . . '000 bus(b)	14,027	13,547	13,825	14,210	17,145

(a) 50 lb per bushel. (b) 40 lb per bushel.

Since 1952-53 the production of malt in Australia has been sufficient to meet local requirements and to provide a margin for export. Exports of Australian produce amounting to 5,103,000 bushels (value \$8,894,000) and 8,216,000 bushels (value \$15,437,000) were recorded in 1969-70 and 1970-71 respectively.

### World production of barley

In comparison with the barley production of other countries that of Australia is extremely small. The main producers in 1971 were the Union of Soviet Socialist Republics, Canada, the United States of America, France and the United Kingdom. China, Republic of (mainland) is also normally a major producer, but recent details are not available. Australian production in 1971 was approximately 2 per cent of the world total.

According to preliminary estimates made by the United States Department of Agriculture, world production of barley in the year 1971 amounted to 5,617 million bushels harvested from 180 million acres, equivalent to a yield per acre of 31.2 bushels. This compared with the production of 5,127 million bushels in the previous year from 171 million acres, giving a yield per acre of 29.9 bushels.

## Sorghum

Grain sorghum is a summer-growing annual palatable to stock and more drought and frost-resistant than maize. It requires a summer rainfall. The growing of this crop for grain on an extensive scale is a comparatively recent development in Australia, and, as with other cereals, operations are highly mechanised. Over the last two years there has been a big expansion in sorghum production and it has become an important export crop.

The climatic conditions of Queensland and northern New South Wales are particularly suited to the growing of sorghum, and development has so far been restricted mainly to these areas, more particularly to Queensland. The grain produced is fed to livestock and has become an important source for supplementing other coarse grains for this purpose. Other sorghums are grown in Australia mainly as green feed, hay and silage (sweet sorghums and Sudan grass) and for the production of brush for broom manufacture (broom millet). In Queensland the growing of grain sorghum is concentrated in the Burnett, Dawson-Callide areas and in the central highlands. In New South Wales the north-western slopes and Murrumbidgee Irrigation Areas are the main areas. This crop is also suitable for the semi-tropical areas of the Northern Territory, where development is proceeding, and the Kimberley Plateau, Western Australia.

In Queensland orderly marketing of the crop is arranged through the Central Queensland Grain Sorghum Marketing Board and the Grain Sorghum Export Committee of the Queensland Grain-growers Association. A State statutory marketing board will commence operations in New South Wales with the marketing of the 1972 crop.

GRAIN SORGHUM: AREA, PRODUCTION AND YIELD PER ACRE, STATES  
1966-67 TO 1970-71

Year	Area			Production(a)			Yield per acre(a)		
	N.S.W.	Qld	Aust.(b)	N.S.W.	Qld	Aust.(b)	N.S.W.	Qld	Aust.(b)
	acres	acres	acres	'000 bushels	'000 bushels	'000 bushels	bushels	bushels	bushels
1966-67	98,161	403,500	502,349	1,527	10,172	11,713	15.6	25.2	23.3
1967-68	78,165	382,192	461,834	1,580	8,939	10,582	20.2	23.4	22.9
1968-69	136,945	371,234	518,164	3,927	6,789	10,820	28.7	18.3	20.9
1969-70	245,180	637,569	886,480	6,011	14,012	20,114	24.5	22.0	22.7
1970-71	445,692	911,118	1,364,474	17,876	29,614	47,673	40.1	32.5	34.9

(a) 60 lb per bushel. Production in New South Wales and Queensland (for years prior to 1968-69) harvested from crop sown in previous year. (b) Includes small areas sown and quantities produced in other States and Territories. Excludes Northern Territory for 1967-68, 1968-69 and 1969-70.

## Maize

Like sorghum, maize is a summer cereal demanding specific soil and climatic conditions. For grain, it is grown almost entirely in the south-east and Atherton Tablelands of Queensland and the north coast and northern tablelands of New South Wales. On the Atherton Tablelands in Queensland, and generally in New South Wales and Victoria, it provides a stock feed for dairy cattle, fat stock and pigs. In times of drought it is used also as a sheep feed. In all States except South Australia, however, this crop is grown to some extent for green feed and silage, particularly in connection with the dairying industry. There is practically no difference between grain and fodder varieties.

There has been a continuing increase in recent years in the growing of maize from hybrid strains of seed. Varieties have been developed which are capable of producing yields per acre considerably in excess of the older open pollinated types. The expansion in areas sown to hybrid maize has led to a parallel development in the specialised industry of growing hybrid strains for seed.

## Maize area, production and yield per acre

MAIZE FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE  
STATES AND A.C.T., 1966-67 TO 1970-71

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
AREA (ACRES)								
1966-67	49,019	1,407	151,010	..	5	..	..	201,441
1967-68	51,569	917	147,732	..	155	..	..	200,373
1968-69	54,484	1,161	108,679	..	39	..	..	164,363
1969-70	80,780	1,145	114,129	..	654	..	..	196,708
1970-71	82,318	1,322	127,815	..	153	..	..	211,608

PRODUCTION ('000 BUSHELLS)(a)								
1966-67	2,471	72	4,948	..	..	..	..	7,491
1967-68	2,320	32	4,778	..	2	..	..	7,132
1968-69	3,083	72	2,713	..	1	..	..	5,869
1969-70	4,006	72	3,459	..	6	..	..	7,543
1970-71	4,191	62	4,076	..	2	..	..	8,331

YIELD PER ACRE (BUSHELLS)(a)								
1966-67	50.4	51.3	32.8	..	12.8	..	..	37.7
1967-68	45.0	34.9	32.3	..	11.4	..	..	35.6
1968-69	56.6	62.2	25.0	..	17.0	..	..	35.7
1969-70	49.6	62.8	30.3	..	9.9	..	..	38.3
1970-71	50.9	47.0	31.9	..	10.2	..	..	39.4

(a) 56 lb per bushel. Production in New South Wales and Queensland (for years prior to 1968-69) harvested from crop sown in previous year.

The average yield for Australia for the five-year period ended 1970-71 was 37.3 bushels per acre. Among principal producing countries, the United States of America average 86.8 bushels per acre and Brazil 21 bushels for 1969.

## Value of maize crop

The average wholesale price of maize in the Melbourne market in 1970-71 was \$2.48 per bushel compared with \$2.17 in 1969-70. The estimated gross value of the crop in each State for the 1969-70 season and the value per acre were as follows.

## MAIZE FOR GRAIN: VALUE OF CROP, STATES, 1970-71

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Aggregate value . \$'000	5,448	101	4,842	..	2	..	10,393
Value per acre . \$	66.18	76.40	37.88	..	13.07	..	49.11

## Exports of maize

## MAIZE: EXPORTS, AUSTRALIA, 1966-67 TO 1970-71

	1966-67	1967-68	1968-69	1969-70	1970-71
Quantity . . . '000 bus	80	101	7	27	881
Value . . . \$'000 f.o.b.	114	169	15	51	1,203



### World production of maize

According to figures issued by the United States Department of Agriculture, world production of maize in the year 1970 amounted to an estimated 9,887 million bushels, harvested from 261 million acres, giving an average yield per acre of 37.9 bushels. This compared with production in the previous year of 10,166 million bushels from 253 million acres, and an average yield of 40.2 bushels per acre.

The United States of America is the most important maize-producing country in the world, and during the four years ended 1969 the area sown to maize in that country averaged 57 million acres or 23 per cent of the world total. During the same period production averaged 4,388 million bushels or 46 per cent of the world total.

### Rice

The principal rice-growing areas of the world are confined almost entirely to Asia, although limited quantities are grown in other countries. In Australia rice was first cultivated at the Yanco Experimental Farm in New South Wales, but it was not grown commercially until 1924-25, when 16,240 bushels were produced from 153 acres. Favoured by high average yields and protected by tariff, rice culture made rapid progress in the Murrumbidgee Irrigation Areas until local requirements were met and a surplus became available for export. The acreage sown in this area is controlled, as the quantity of water available is limited.

Apart from small experimental areas in Western Australia and the Northern Territory, rice-growing in Australia is practically confined to the Murray and Murrumbidgee Irrigation Areas in New South Wales and recently, the Burdekin area of Queensland. The bulk of Australia's exports of rice in 1970-71 was shipped to Papua New Guinea, United Kingdom and Okinawa. Details relating to area, production, and Australian-produced exports for the years 1966-67 to 1970-71 are shown in the following table.

RICE: AREA, PRODUCTION AND EXPORTS, AUSTRALIA(a)  
1966-67 TO 1970-71

Year		No. of holdings growing rice(b)	Area	Production (Paddy rice)		Average yield (paddy) per acre	Imports	Exports
				Quantity	Gross value(c)			
			acres	'000 bushels (d)	\$'000	bushels (d)	'000 lb	'000 lb
1966-67	. . .	1,164	72,724	11,250	12,445	152.6	3,718	198,370
1967-68	. . .	1,210	75,957	11,597	12,831	152.7	3,749	224,956
1968-69	. . .	1,464	83,267	13,420	14,358	161.2	3,225	245,202
1969-70	. . .	1,804	99,244	12,951	14,533	130.5	3,397	283,918
1970-71	. . .	1,880	94,033	15,698	13,720	166.9	966	225,830

(a) For some years particulars of area and production for Western Australia and the Northern Territory are not available for publication, and are excluded. (b) Twenty acres or more in area. (c) Excludes the value of straw. (d) 42 lb per bushel.

### Fodder crops

#### Hay

Because of the comparatively unreliable nature of rainfall in Australian agricultural and pastoral areas, hay as a fodder crop occupies a position of importance. In 1970-71 hay represented 9 per cent of the total area of crops. Up to 1946-47 hay, in terms of area, was second only to wheat for grain, but in more recent years it has been supplanted by green feed (for feeding-off). Hay is generally considered to include cereal hay, meadow hay and lucerne hay. Cereal crops cut early for hay contain a higher level of protein than those cut late.

In most European countries hay is made almost entirely from meadow pastures, but in Australia a very large proportion is made from cereals and lucerne, the hay being stored loose, in sheaves or baled. Because of its bulk, hay is usually produced for individual or local use, except in times of drought, when large inter-regional transfers may take place. Meadow hay requires greater care in preparation than cereal hay. Baling must be spaced carefully behind mowing to ensure that the bales are dry enough to prevent moulding, but not so dry as to result in excessive leaf loss. The leaves contain the bulk of the protein. Lucerne hay requires similar attention.

**HAY: AREA, PRODUCTION AND YIELD PER ACRE, STATES AND TERRITORIES  
1966-67 TO 1970-71**

<i>Season</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>AREA ('000 ACRES)</b>									
1966-67	823	1,558	129	482	295	203	1	4	3,496
1967-68	586	1,165	119	429	318	179	2	2	2,800
1968-69	823	1,847	112	615	341	211	2	4	3,955
1969-70	748	1,200	181	384	500	172	4	3	3,192
1970-71	761	1,266	161	485	469	212	5	3	3,362
<b>PRODUCTION ('000 TONS)</b>									
1966-67	1,481	2,982	314	729	417	437	2	9	6,371
1967-68	806	1,556	296	418	421	309	3	3	3,812
1968-69	1,439	3,635	263	985	501	494	5	7	7,330
1969-70	1,406	2,461	373	608	508	362	5	7	5,728
1970-71	1,355	2,455	376	743	662	441	6	6	6,044
<b>YIELD PER ACRE (TONS)</b>									
1966-67	1.80	1.91	2.44	1.51	1.41	2.15	1.63	2.14	1.82
1967-68	1.38	1.34	2.49	0.97	1.32	1.73	1.30	1.19	1.36
1968-69	1.75	1.97	2.35	1.60	1.47	2.35	2.38	1.60	1.85
1969-70	1.88	2.05	2.06	1.58	1.00	2.10	1.26	2.01	1.80
1970-71	1.78	1.94	2.33	1.53	1.41	2.08	1.25	1.80	1.80

Plate 39 shows the area under hay since 1900-01 (page 746).

Information regarding areas cut for hay and varieties grown in 1970-71 is given in the following table.

**HAY: AREA OF VARIOUS KINDS GROWN, STATES AND TERRITORIES  
1970-71  
(Acres)**

<i>State or Territory</i>	<i>Oaten</i>	<i>Lucerne</i>	<i>Wheaten</i>	<i>Other</i>	<i>Total</i>
New South Wales	68,924	385,109	44,722	261,835	760,590
Victoria	165,886	102,753	20,841	976,679	1,266,159
Queensland	8,157	94,958	9,831	48,449	161,395
South Australia	128,056	80,867	46,679	229,353	484,955
Western Australia	203,608	2,174	64,873	198,310	468,965
Tasmania	9,598	6,675	258	195,129	211,660
Northern Territory	..	110	..	4,785	4,895
Australian Capital Territory	276	2,177	61	566	3,080
<b>Australia</b>	<b>584,505</b>	<b>674,823</b>	<b>187,265</b>	<b>1,915,106</b>	<b>3,361,699</b>

For all States and the Territories combined, the proportions of the areas sown to the principal kinds of hay in 1970-71 were 17.4 per cent for oaten, 20.1 per cent for lucerne, 5.6 per cent for wheaten, and 57.0 per cent for other hay.

The following table shows the estimated gross value, and the value per acre, of the hay crop of the several States for the 1970-71 season.

## HAY: VALUE OF CROPS, STATES 1970-71

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.(a)
Aggregate value . \$'000		32,155	40,461	12,882	8,613	15,396	5,865	115,797
Value per acre . \$		42.28	31.96	79.82	17.76	32.83	27.71	34.45

(a) Includes \$184,000 and \$241,000 for the Northern Territory and Australian Capital Territory respectively.

## Farm stocks of hay

Particulars of stocks of hay held on farms at 31 March for the years 1967 to 1971 are given in the table below.

## STOCKS OF HAY HELD ON FARMS, STATES AND A.C.T., 1967 TO 1971

(Tons)

31 March—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.(a)
1967 . . .	1,888,668	2,175,731	270,470	544,676	249,531	399,891	8,151	5,537,118
1968 . . .	1,273,385	1,104,034	241,922	267,677	223,115	297,118	3,594	3,410,845
1969 . . .	1,819,874	2,987,848	152,945	723,057	243,836	450,547	4,975	6,383,082
1970 . . .	2,536,522	2,376,974	254,397	630,388	237,339	443,332	13,540	6,492,492
1971 . . .	2,520,843	2,653,004	283,216	614,417	400,592	464,146	9,650	6,945,868

(a) Excludes the Northern Territory, for which particulars are not available.

Under normal conditions, hay, whether whole or in the form of chaff, is somewhat bulky for overseas trade, and consequently does not figure largely among Australian exports. During 1970-71 exports amounting to 11,451 tons, valued at \$465,000, were made, principally to Iran, Kuwait, Oman and Singapore. Imports of hay are not recorded separately, but are considered to be negligible.

## Green feed

Considerable areas are devoted to the growing of green feed, usually as an adjunct to cereal operations or as a minor crop in irrigation areas. The areas recorded in respect of green feed include areas of crops cut for feeding to livestock as green feed or ensilage, together with areas fed off to stock as green forage. Statistics of green feed exclude areas which may have been sown with the intention of harvesting for grain, but which, owing to adverse conditions, showed no promise of producing grain or even hay and were fed off to livestock. The principal crops cut for green feed are lucerne and oats, while small quantities of barley, sorghum, wheat, maize, rye, and sugar cane are also used in this way. In 1970-71 the area under green feed (6,759,969 acres) consisted of oats (2,185,672 acres), lucerne (3,346,193 acres), barley (287,530 acres), sorghum (416,024 acres), wheat (191,080 acres), rye (25,772 acres), maize (13,290 acres), sugar cane (795 acres), and other crops (293,613 acres). Particulars concerning the area of green feed in the several States during each of the years 1966-67 to 1970-71 are given in the following table.

## GREEN FEED: AREA, STATES AND TERRITORIES, 1966-67 TO 1970-71

('000 acres)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1966-67 . . .	2,133	443	1,179	1,169	399	74	..	1	5,399
1967-68 . . .	2,326	545	1,337	1,217	414	75	..	1	5,916
1968-69 . . .	2,428	352	1,406	1,130	297	99	1	1	5,714
1969-70 . . .	2,889	364	1,631	1,295	383	89	1	1	6,654
1970-71 . . .	3,130	421	1,287	1,485	367	67	..	2	6,760

In the 1970-71 season green feed ranked second to wheat in area of crops throughout Australia. A graph showing the area sown to green feed appears on plate 39, page 746. The value of these crops is variously estimated in the several States, but the Australian total, excluding Western Australia, may be taken as approximately \$29,743,000 for the 1970-71 season.

**Ensilage**

Ensilage is produced from herbage compacted tightly to exclude air and kept from contact with air and extraneous moisture to avoid moulding. Fermentation results in a dark mass with a high protein and lactic acid content. Molasses may be added to hasten fermentation. Ensilage may be stored in pits or stacks or in constructed silos.

The several State Governments devote a considerable amount of attention to the education of the farming community with regard to the value of ensilage. Monetary aid is afforded in the erection of silos, and expert advice is supplied in connection with the design of the silos and the cutting and packing of the ensilage. Information regarding production and farm stocks of ensilage for the years 1966-67 to 1970-71 is given in the following table.

**ENSILAGE: PRODUCTION AND FARM STOCKS, STATES AND A.C.T.**  
1966-67 TO 1970-71  
(Tons)

<i>Period</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Production during—								
1966-67 season .	312,968	335,244	31,895	65,548	29,135	87,041	406	862,237
1967-68 " .	134,408	160,771	36,238	22,388	30,322	66,602	40	450,769
1968-69 " .	208,650	337,360	18,221	91,925	45,469	71,209	98	772,932
1969-70 " .	426,738	289,413	57,396	41,179	38,549	52,449	1,650	907,374
1970-71 " .	377,234	211,863	124,984	45,814	68,803	46,595	66	875,359
Farm stocks at—								
31 March 1967 .	519,371	233,979	77,180	62,262	20,476	68,464	740	982,472
" " 1968 .	365,488	82,139	79,461	24,749	21,460	54,118	4	627,419
" " 1969 .	393,838	263,190	68,222	80,892	30,078	66,596	27	902,843
" " 1970 .	690,892	251,880	73,496	69,075	19,656	66,969	1,679	1,173,647
" " 1971 .	846,971	222,554	127,574	57,211	36,944	68,222	49	1,359,525

**Sugar cane**

The growing of sugar cane is restricted to those coastal areas in Queensland and northern New South Wales which have suitable climatic and soil conditions.

The Bureau of Sugar Experiment Stations in Queensland and the Colonial Sugar Refining Company Limited render useful service to the sugar industry by advocating and demonstrating better methods of cultivation and the more scientific use of fertilisers, lime, etc. and by producing and distributing improved varieties of cane. In common with these two organisations, Sugar Research Ltd, of Mackay, undertakes technological research in raw sugar milling practices.

**Sugar agreements and marketing arrangements in Australia**

In Year Book No. 37, pages 940-1, a summary is given of the agreement operating between the Commonwealth and Queensland Governments in respect of the sugar industry in Australia. Briefly, the agreement places an embargo on sugar importations and fixes the maximum wholesale price of sugar consumed in Australia. The current agreement, which replaced the 1962 agreement (extended by supplementary agreements) is for the period from 1 July 1969 to 30 June 1974 and prescribes maximum wholesale prices for sugar (delivered State capital cities) equivalent to a retail price of 10.5 cents per lb.

Production of sugar is regulated under the terms of the agreement. At the mill level control is exerted by means of seasonal 'mill peaks' in respect of Queensland mills and a proportionate allowance for New South Wales mills. The combined total equals the estimated requirements of the domestic and export markets. Farm production is regulated according to the limit on the mill which the farm supplies. Exports are limited by the export quota provisions of the International Sugar Agreement (*see next page*).

The Queensland Government acquires the whole of the sugar production of that State and of New South Wales by legislation and private agreement respectively. The net proceeds of all sugar sold are pooled and uniform prices paid to mills. Production for 1971-72 is estimated to be 2,749,000 tons 94 net titre, to which New South Wales is expected to contribute approximately 122,000 tons.



### International Sugar Agreement

The International Sugar Agreement of 1937 was superseded by the International Sugar Agreements of 1953, 1958 and 1968. Details of the 1937, 1953 and 1958 Agreements were given in Year Books No. 40, pages 881-2, No. 48, page 936 and No. 54, page 892 respectively.

The 1968 International Sugar Agreement came into force on 1 January 1969 and will operate for five years. Like its predecessors, the 1968 Agreement is built around a schedule of export quotas governing the net exports of exporting members to the world 'free' market. The Agreement is designed to maintain a balance between total world free market supply and demand by adjustments to the level of quotas in effect of exporting members. Quotas in effect cannot be adjusted downwards below 90 per cent of basic export tonnages except in exceptional circumstances where adjustments down to 85 per cent may be possible.

Quota adjustments under the Agreement must take account of the prices (meaning 'prevailing prices' as defined by the Agreement), ruling in the world free market. The quota adjustment provisions pivot around a world free market price of U.S. four cents per pound f.o.b. and stowed Caribbean port, in bulk. When the price is below U.S. four cents, the system is designed to provide an upward pressure on prices by quota reductions. When the price is above U.S. four cents, the system is designed to apply a downward pressure on prices by increases in the level of quotas in effect above basic export tonnages.

Under the Agreement, exporters are required to establish and maintain certain levels of minimum stocks which are only to be released to the market when the price rises above U.S. 4.75 cents. If the price rises above U.S. 5.25 cents, all quota restraints become inoperative, but if the price rises above U.S. 6.50 cents, exporters are required to supply importer members with certain quantities of sugar at prices not exceeding the commercial equivalent of U.S. 6.50 cents, subsequently raised to U.S. 6.95 cents in conformity with U.S. currency devaluation.

If the price is below U.S. 3.50 cents, minimum export quotas in effect are to apply, while at prices below U.S. 3.25 cents, members are obliged to prohibit imports from non-member countries.

Australia has a basic export tonnage under this Agreement of 1,100,000 metric tons raw value (about 1,040,000 long tons of actual raw sugar) and is obliged to establish a minimum level of uncommitted stocks amounting to 15 per cent of this quantity.

Australian exports of negotiated price sugar to the United Kingdom under the British Commonwealth Sugar Agreement, and to the U.S.A. market, are not controlled by the International Sugar Agreement.

In 1971, in accordance with the Agreement, member countries reviewed its operation. They made no change in basic export tonnages and price levels, but listed a number of points which would require consideration when the Agreement is renegotiated.

### British Commonwealth Sugar Agreement

On 1 January 1953 the British Commonwealth Sugar Agreement became effective. A triennial review of the Agreement was held late in 1971, and in the expectation of the United Kingdom entering the European Economic Community, the negotiations were concluded on the understanding that the Agreement would terminate at the end of 1974. Should the United Kingdom not enter the E.E.C. arrangements will be made for a special review to consider the future of the Agreement. Under the Agreement Australia has a Negotiated Price Quota of 335,000 tons per annum to the United Kingdom. The negotiated price for Australian sugar had remained at £Stg. 43.10.0 per long ton f.o.b. and stowed, bulk sugar 96° polarisation, for the years 1966 to 1971. The price was increased to £Stg. 50 for 1972, 1973 and 1974.

The Agreement also allows Australia an adjusted Overall Agreement Quota (including the negotiated price quota) of 630,000 tons per annum, which can be adjusted from time to time as a result of re-allocations of other Commonwealth Sugar Agreement exporters. The balance of this quota over the negotiated price quota may be sold to preferential markets on the basis of the world market price plus preference, as part of Australia's export quota under the International Sugar Agreement. Early in 1972 the United Kingdom prohibited the import of free market sugar.

### Exports to the United States of America

Australian exports to the U.S.A. are governed by legislation first enacted by the U.S.A. in 1962. The present legislation covers the three years to the end of 1974. These exports are sold on the U.S. domestic raw sugar market, the supplies to which are regulated with a view to ensuring stable and equitable prices, independently of prices ruling elsewhere in the world.

Australian export entitlements to this market vary from year to year. In 1971 they totalled 175,150 long tons of raw sugar and at 23 February 1972 our 1972 entitlement stood at 180,000 long tons.

### **Fruit Industry Sugar Concession Committee and sugar rebates**

The Fruit Industry Sugar Concession Committee was established by agreement between the Commonwealth and Queensland Governments and administers a fund provided from contributions by the Queensland Government on behalf of the sugar industry.

Until 15 May 1960 a domestic rebate of \$4.40 a ton of refined cane sugar used in processing approved fruit products was paid to Australian manufacturers, provided they bought fresh fruit for processing at prices not lower than those declared by the Committee as reasonable. This was increased to \$10 a ton from 16 May 1960 and to \$15 from 1 July 1969.

An export sugar rebate is also paid by the Committee to exporters of approved fruit products to ensure that manufacturers do not pay higher prices for the Australian sugar content than the price for which the cheapest imported sugar could be landed duty free in Australia. The Queensland Government is responsible for payment of a similar rebate to exporters of other approved products. Payment of the export sugar rebate in respect of approved fruit products has been made conditional upon satisfactory arrangements having been made for payment for the fresh fruit used for processing at not less than the prices (if any) which the Committee has declared to be reasonable.

Under the Sugar Agreement 1969 the Queensland Government contributes \$924,000 to the fund annually, out of which the Committee pays the domestic sugar rebate on all approved fruit products manufactured. The Queensland Government also reimburses the Committee the difference between the domestic rebate and the export rebate paid on approved fruit products which are subsequently exported. Any money remaining in the fund after the payment of rebates and administrative expenses may be used by the Committee for the promotion of the use and sale of fruit products, or for research for the purpose of increasing the yield per acre of Australian fruit, or of obtaining information regarding Australian marketable fresh fruits.

### **Financial assistance to the sugar industry**

Under the provisions of the *Sugar Marketing Assistance Agreement Act 1967* the Commonwealth Government arranged a loan of \$19 million, plus interest on a temporary advance of this amount from the Reserve Bank, to assist the returns from No. 1 Pool in the 1966 season, and \$3,559,193 for a similar purpose in respect of the 1967 season. The total amount of \$23,327,590 so advanced is repayable over ten years commencing in mid-1970, and was not subject to interest before then. Thereafter it incurs interest at the rate of five per cent per annum.

### **Bulk handling of sugar**

Bulk handling and mechanised loading and unloading of raw sugar is now in operation throughout the Australian sugar industry. Terminals for the bulk loading of sugar were opened at Mackay in 1957, at Lucinda and Bundaberg in 1958, at Townsville in 1959, at Mourilyan in 1960, and at Cairns in 1964. A second storage shed at Bundaberg, a third shed at Mackay and second sheds at Lucinda and Townsville have been opened subsequently to give a total bulk storage capacity of 1,300,000 long tons. Extensions, commenced in 1971, at Cairns and Mourilyan will make available storage for a further 151,000 tons as from the 1972 season. The comparatively small New South Wales sugar industry was converted to bulk handling in 1954. Bulk receiving facilities are in operation at all Australian refineries.

### **Mechanisation**

Mechanisation of harvesting processes has been gradually developed and has been accelerated in recent years. In Queensland the proportion of the crop mechanically cut rose from 8.7 per cent in 1962 to 97.03 per cent in 1971 while the proportion mechanically loaded on to the transport conveying cane to mills rose from 64.5 per cent to 99.63 per cent in the same period. Chopper harvesters, which chop cane into short lengths and pour it into bins hauled alongside, harvested 88.26 per cent of the crop, and whole-stalk harvesters, which cut the cane at the base and deposit the whole stalks in bundles, cut 8.77 per cent. In New South Wales, mechanical harvesting takes place in two of the three mill areas, and is being used on an increasing scale. In the case of the 'Condong' mill, in whose area mechanisation is most widely used, 21.70 per cent of cane was mechanically harvested during the 1971 season.

### **Area of sugar cane**

A brief outline of the development of the industry was included in earlier issues of the Year Book (see No. 38, page 985). The area of sugar cane in Australia for the seasons 1966-67 to 1970-71 is shown in the following table. The areas shown in the table do not include the small acreage cut for green feed, which in 1970-71 amounted to 795 acres. The whole area planted is not cut for crushing during any one season, there being always a considerable amount of young and 'stand-over' cane as well as a small quantity required for plants.

**SUGAR CANE: AREA(a), STATES, 1966-67 TO 1970-71**  
(Acres)

Year	New South Wales			Queensland			Australia			Total		
	Area crushed	Area of standover and newly- planted cane	Area cut for plants	Area crushed	Area of standover and newly- planted cane	Area cut for plants	Area crushed	Area of standover and newly- planted cane	Area cut for plants			
1966-67	.	.	22,475	18,548	613	534,998	78,609	13,265	557,473	97,157	13,878	668,508
1967-68	.	.	22,181	18,761	488	530,828	89,494	13,194	553,009	108,255	13,682	674,946
1968-69	.	.	22,174	18,588	599	546,306	84,237	13,314	568,480	102,825	13,913	685,218
1969-70	.	.	19,838	19,490	487	505,978	120,735	13,808	525,816	140,225	14,295	680,336
1970-71	.	.	22,263	19,879	471	522,655	104,535	12,457	544,918	124,414	12,928	682,260

(a) Excludes areas cut for green fodder.

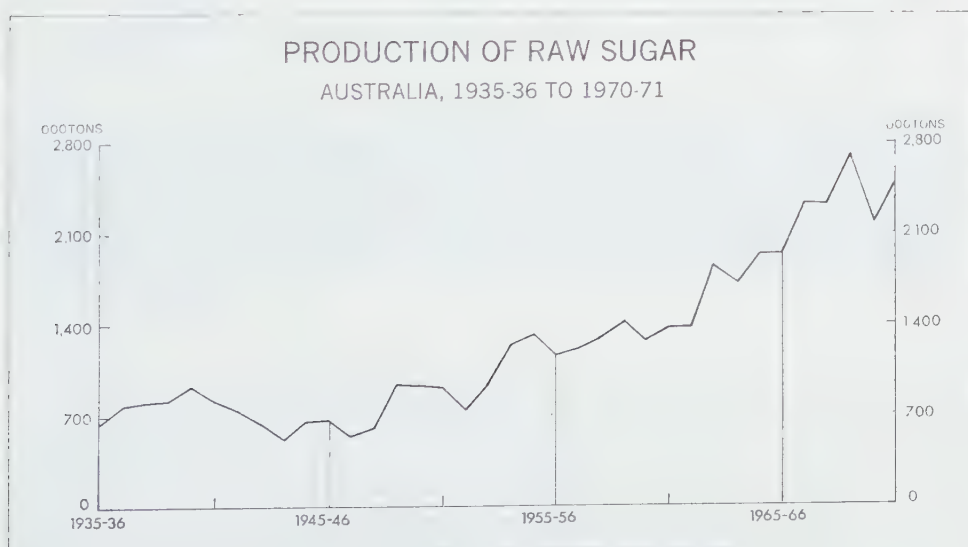
**Production of cane and sugar**

The production of sugar cane in 1970-71 was 17,366,000 tons, which was 1,047,000 tons below the record production in 1968-69. The production of raw sugar from 1935-36 is shown in plate 43, below.

**SUGAR CANE: PRODUCTION OF CANE AND RAW SUGAR, STATES, 1966-67 TO 1970-71**  
(Tons)

Year	New South Wales		Queensland		Australia			
	Cane	Sugar(a)	Cane	Sugar(a)	Cane	Sugar(a)		
1966-67	.	.	1,171,441	139,967	15,513,449	2,202,809	16,684,890	2,342,776
1967-68	.	.	1,038,507	120,583	15,717,789	2,213,810	16,756,296	2,334,393
1968-69	.	.	997,813	120,381	17,414,966	2,604,319	18,412,779	2,724,700
1969-70	.	.	835,232	97,721	14,699,785	2,081,036	15,535,017	2,178,757
1970-71	.	.	1,160,064	135,225	16,206,027	2,338,018	17,366,091	2,473,743

(a) Raw sugar at 94 net titre.



**PLATE 43**



Climatic conditions in New South Wales are such that the crop matures in from twenty to twenty-four months, whereas in Queensland a period of from twelve to sixteen months is sufficient. The average yields of cane and sugar per acre for the years 1966-67 to 1970-71 are shown below. Allowance should be made in interpreting these figures for the disparity in maturing periods noted above.

**SUGAR CANE AND SUGAR: YIELD PER ACRE, STATES, 1966-67 TO 1970-71**  
(Tons)

Year	New South Wales			Queensland			Australia		
	Cane per acre crushed	Sugar per acre crushed	Cane to each ton of sugar	Cane per acre crushed	Sugar per acre crushed	Cane to each ton of sugar	Cane per acre crushed	Sugar per acre crushed	Cane to each ton of sugar
1966-67	52.12	6.23	8.37	29.00	4.12	7.04	29.93	4.20	7.12
1967-68	46.82	5.44	8.61	29.61	4.17	7.10	30.30	4.22	7.18
1968-69	45.00	5.43	8.29	31.88	4.77	6.69	32.39	4.79	6.76
1969-70	42.10	4.93	8.55	29.05	4.11	7.06	29.54	4.14	7.13
1970-71	52.11	6.10	8.55	31.01	4.47	6.93	31.87	4.54	7.02

#### Production and utilisation of sugar

Details of the production and utilisation of sugar for the years 1966-67 to 1970-71 are shown below. Consumption is shown in terms of refined sugar, including that consumed in manufactured products.

**SUGAR: PRODUCTION AND UTILISATION, AUSTRALIA, 1966-67 TO 1970-71**

Year	Changes in stocks(a)	Production (raw)(b)	Exports(c)	Miscellaneous uses(d)	Consumption in Australia(e)	
					Total	Per head
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb
1966-67	-36.5	2,222.1	1,674.6	20.8	563.2	107.7
1967-68	+170.0	2,393.9	1,634.8	20.8	568.3	106.7
1968-69	n.a.	2,563.2	2,058.4	n.a.	584.7	107.6
1969-70	n.a.	2,167.1	1,387.9	n.a.	609.1	109.6
1970-71	n.a.	2,413.0	1,571.6	n.a.	626.2	110.4

(a) Includes allowance for estimated sugar content of imported foodstuffs. (b) Year ended June; *tel quel* basis. Not comparable with production figures shown in production table as those relate to year ended March on a 94 net titre basis. (c) Raw and refined, including ships' stores and sugar in exported foodstuffs. (d) Includes refining losses and quantities used in golden syrup and treacle. (e) Includes sugar content of manufactured products consumed.

The statistics of sugar usage in factories for 1968-69, 1969-70 and 1970-71 are not yet available. However, the quantity recorded as used in factories in 1967-68 amounted to 377,132 tons compared with 372,394 tons in 1966-67 and 371,713 tons in 1965-66. Particulars of sugar used in establishments not classified as factories are not available, and consequently these quantities are deficient to that extent. In 1967-68 the reported consumption by factories engaged in the production of jams, jellies and preserved and dried fruit and vegetables amounted to 77,288 tons, by those producing confectionery, ice cream, etc., to 74,196 tons, by breweries to 47,438 tons, and by factories producing aerated waters, cordials, etc., to 70,775 tons.



### Sugar prices and returns

The current prices of sugar in Australia (as determined under the Sugar Agreement in Australia, see page 772) and details of net returns for raw sugar from 1967-68 to 1970-71 are shown in the following tables.

#### SUGAR: PRICES IN AUSTRALIA

Year	Raw sugar, 94 net titre			Refined sugar		
	Average return per ton received by millers and growers for—			Date of determination	Wholesale price to retailer per ton	Retail price capital cities per lb
	Home consumption	Exports(a)	Whole crop(a)			
	\$	\$	\$		\$	cents
1967-68(b)	142.80	59.45	82.05	19.6.67	206.72	10.5
1968-69(b)	143.20	63.04	82.10			
1969-70(b)	143.10	80.83	99.76			
1970-71(c)	140.30	87.83	102.34			
1971-72(c)	138.70	100.94	110.35			

(a) Includes 'excess' sugar. (b) Excludes repayable Commonwealth arranged loan (see page 774). (c) Includes repayment of Commonwealth loan.

#### RAW SUGAR(a): NET RETURNS, AUSTRALIA, 1966-67 TO 1970-71

(Source: The Queensland Sugar Board)

Year	Proportion exported	Net value of exports per ton	Average price per ton for whole crop	Estimated value of crop
	per cent	\$	\$	\$'000
1966-67	72.50	57.47	75.01	175,694
1967-68	72.89	59.45	82.05	191,471
1968-69	76.23	63.04	82.10	223,638
1969-70	69.61	80.83	99.76	217,279
1970-71	72.36	87.83	102.34	254,191

(a) 94 net titre.

The estimated value of the raw sugar produced has been based upon details taken from the audited accounts of the Queensland Sugar Board. The values stated comprise the gross receipts from sales in Australia and overseas, less refining costs, freight, administrative charges, etc., and export charges. They include concessions to the fruit industry and other rebates, which in 1970-71 amounted to \$3,132,000, and also payment of the first instalment of the repayable Commonwealth grants referred to earlier. The value thus obtained represents the net market value of all raw sugar sold, which, less the rebates, is divided between the growers and millers in the approximate proportions of 70 per cent and 30 per cent respectively.

### Exports of sugar

#### RAW AND REFINED SUGAR: EXPORTS, AUSTRALIA, 1966-67 TO 1970-71

	1966-67	1967-68	1968-69	1969-70	1970-71
Quantity . . . . . tons	1,652,263	1,597,235	2,029,177	1,364,302	1,546,372
Value . . . . . \$'000 f.o.b.	100,026	97,582	122,214	116,114	149,636

## Tobacco

Tobacco is a summer-growing annual which requires a temperate to tropical climate, adequate soil moisture and a frost-free period of approximately five months. In Australia almost all tobacco is grown under irrigation. Because of specialised requirements, production is limited to areas with suitable soils and climate. The main centres of production are the Mareeba-Dimbulah districts of north Queensland and Myrtleford in north-eastern Victoria. Other areas where tobacco is grown include Bundaberg, Beerwah and Texas (Queensland), Ashford (New South Wales) and Wangaratta (Victoria). All tobacco grown in Australia is of the flue-cured type except for small quantities of burley tobacco produced mainly in Victoria.

### Marketing

Between 9 May 1941 and 24 September 1948 all leaf was under the direct control of the Australian Tobacco Board, and prices were paid on leaf appraisal. Subsequently the Board was disbanded, and sales have been by open auction through the Tobacco Leaf Marketing Board (Queensland and northern New South Wales) and the Victorian Tobacco Growers Association Ltd (southern New South Wales and Victoria). In 1964 the Victorian Tobacco Leaf Marketing Board was set up to market the portion of the crop that was formerly sold by the Victorian Tobacco Growers Association Ltd, and in 1965 a Board was established in New South Wales. However, the actual physical handling of New South Wales leaf at auction is carried out by the Queensland and Victorian authorities.

In 1965 the Commonwealth and State Governments agreed to a stabilisation plan for the tobacco growing industry with an annual marketing quota of 26 million pounds (green weight) of leaf to be sold under an agreed grade and price schedule providing for an average minimum price, based on normal crop fall-out. The overall marketing quota is divided among tobacco-producing States according to a formula approved by the Australian Agricultural Council. The determination of grower disputes in regard to quotas from State allocations is the responsibility of State Quota Committees.

In 1968, the final year of the plan, the Governments concerned agreed that it should continue for a further period of five years with an increased marketing quota for the 1969 selling season of 28.5 million pounds, which was subsequently increased to 31.5 million pounds to correct industry stockholdings which were depleted by higher than expected manufacturer usage. Provision was made for an annual review of the quota and in 1970 a basic quota of 34 million pounds which was set for the 1971 season was retained for the 1972 season. Each quota is to be divided among the producing States in the same proportions as the original quota.

The plan is administered by the Australian Tobacco Board, constituted under the *Tobacco Marketing Act 1965-66* and representative of the Commonwealth, tobacco-producing States, growers, and manufacturers.

The guaranteed average minimum Australian price for the 1971 and 1972 seasons, 114.5 cents per lb, is 5.5 cents per lb above the price set for the 1970 season.

### Central Tobacco Advisory Committee

The Australian Agricultural Council formed the Standing Advisory Committee on Tobacco during 1950. This Committee consisted of representatives of tobacco growers, tobacco manufacturers and the Commonwealth and State Governments. Its main functions were to review the industry and make recommendations on factors affecting its development and progress. The Committee was reconstituted as the Central Tobacco Advisory Committee in 1952-53.

In order to receive funds for increased research and extension activities, the Tobacco Industry Trust Account was established by the *Tobacco Industry Act 1955-65* and came into operation on 2 December 1955. Growers and manufacturers contribute to the Trust Account by way of levies imposed on Australian leaf sold and purchased. These industry contributions are matched by the Commonwealth Government with payments made as funds are expended. The Governments of the three tobacco producing States make fixed annual contributions. Money standing to the credit of the Account may be applied for the purpose of research and investigation in connection with the tobacco industry, the training of personnel and the publication and dissemination of scientific and technical information for the industry.

The Central Tobacco Advisory Committee is required to make recommendations to the Minister for Primary Industry in regard to expenditure from the Tobacco Industry Trust Account. By 30 June 1971 expenditure from the Account amounted to \$8.3 million, and allocations for support of research projects in 1971-72 totalled \$945,797.

### Tobacco research and extension

The Commonwealth Scientific and Industrial Research Organization and the State Departments of Agriculture in the tobacco growing States are carrying out investigations into a wide range of

problems involving fundamental and applied research in plant breeding and variety evaluation nutrition, disease and pest control, and cultural practices. The State Departments also provide extension services for tobacco growers. A Mechanisation Sub-Committee of the Central Tobacco Advisory Council was established in 1970 to investigate and advise on practical aspects of mechanisation of the tobacco-growing industry.

Details of the recommendations by the Tobacco Inquiry Committee and grants periodically approved by the Commonwealth Government up to 30 June 1953 are given in Year Book No. 40, pages 895-6, and in previous issues.

### Tobacco factories

Manufacturers of Australian cigarettes and tobacco are granted a lower rate of duty on imported tobacco leaf, provided it is blended with a prescribed minimum percentage of Australian leaf. These percentages, which in November 1946 stood at 3 per cent for cigarettes and 5 per cent for tobacco, have been increased progressively in intervening years and since 1 January 1966 have been set at 50 per cent for both cigarettes and tobacco.

In 1967-68 the quantity of cured leaf recorded as used in tobacco factories in Australia amounted to 50 million lb, of which 23 million lb was of local origin. The balance was imported, chiefly from the United States of America and South Africa. Figures for 1968-69, 1969-70 and 1970-71 are not yet available.

### Tobacco area and production

The area planted to tobacco in 1970-71 was 8.3 per cent below the record area established in 1962-63. Production at 37,393,000 lb was 0.4 per cent below the previous record established in 1969-70.

#### TOBACCO: AREA AND PRODUCTION, STATES, 1966-67 TO 1970-71

<i>Year</i>		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
AREA (ACRES)								
1966-67	. .	1,794	8,455	12,134	..	..	..	22,383
1967-68	. .	1,831	8,664	12,472	..	..	..	22,967
1968-69	. .	2,190	9,727	13,837	..	..	..	25,754
1969-70	. .	2,739	11,015	12,908	..	..	..	26,662
1970-71	. .	3,042	10,481	13,411	..	..	..	26,934
PRODUCTION OF DRIED LEAF ('000 lb)								
1966-67	. .	2,133	10,953	14,819	..	..	..	27,905
1967-68	. .	2,075	7,625	15,021	..	..	..	24,721
1968-69	. .	2,481	12,075	19,517	..	..	..	34,072
1969-70	. .	3,061	15,516	18,975	..	..	..	37,553
1970-71	. .	2,800	14,848	19,745	..	..	..	37,393

### Imports and exports of tobacco

Imports of tobacco and tobacco manufactures into Australia during 1970-71 were valued at \$30.0 million. This included 29.7 million lb of unmanufactured tobacco valued at \$20.1 million. Exports of tobacco and tobacco manufactures during 1970-71 were valued at \$4,771,000, including Australian produce, \$3,905,000.

### Cotton

This annual shrub requires a hot climate and inter-row weed control. Lint (long fibres) is extracted from the seed cotton in the ginneries and is used for yarn. The residue, consisting of linters (short fibres), kernels and hulls (outer seed coat), is treated in oil mills. Linters are used in the manufacture of felts and other materials, where fibre length is of little importance. The kernels when crushed produce an oil which is used for both edible and industrial purposes. The residual meal is a useful high protein stockfeed; the hulls may be used as fuel.

Until 1964 cotton growing was mainly confined to Queensland, most of it being grown under conditions of natural rainfall. Since then there has been an increasing trend in the use of irrigation. A sound industry has been established in the Namoi and Macquarie Valleys in New South Wales



with water provided by the Keepit and Burrendong Dams. More than three-quarters of Australia's raw cotton requirements are now produced in that area. Cotton is also grown under irrigation in Queensland and on the Ord River of Western Australia and to a lesser extent in the Murrumbidgee Irrigation Areas of New South Wales. Nearly all Australian cotton is now grown with the assistance of irrigation and acreage yields compare more than favourably with those obtained by traditional overseas cotton producing countries. Australian production currently satisfies all the requirements of local mills for short and medium staple cotton and should in the future, supply the comparatively small quantities of longer staple combing cottons currently imported. Cotton production in 1972 is expected to reach 174,000 bales with an export surplus of some 60,000 bales.

### Cotton bounty

For particulars of the *Cotton Bounty Act* 1951-1958, see page 1044 of Year Book No. 49. This Act was replaced by the *Raw Cotton Bounty Act* 1963-1966 under which the Commonwealth agreed to pay a bounty on raw cotton produced and sold for use in Australia at the rate of 13.4375 cents per lb for Middling 1" White, with premiums and discounts on grades and staples above and below, up to a maximum of \$4 million in any one year, for a period of five years from 1 January 1964. In 1968 this Act was amended to extend bounty payments to all cotton produced in Australia of a grade higher than Strict Good Ordinary, whether used in Australia or not, provided it has a staple length of  $\frac{3}{8}$ " or greater. The Commonwealth Government has phased out the bounty assistance. The maximum bounty remained at the previous level of \$4 million for 1969, falling to \$3 million in 1970, and was \$2 million in 1971 the final year in which it was paid.

### Cotton area and production

#### COTTON: AREA, PRODUCTION AND YIELD PER ACRE, STATES AND TERRITORIES 1966-67 TO 1970-71

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
AREA (ACRES)									
1966-67	30,104	..	11,167	..	11,892	..	..	..	53,163
1967-68	53,474	..	11,629	..	11,782	..	..	..	76,885
1968-69	59,769	..	13,329	..	8,327	..	..	..	81,425
1969-70	56,662	..	13,358	..	7,210	..	..	..	77,230
1970-71	65,242	..	12,882	..	8,505	..	..	..	86,629
PRODUCTION (UNGINNED) ('000 lb)									
1966-67	79,159	..	11,800	..	29,400	..	..	..	120,360
1967-68	170,064	..	18,718	..	25,954	..	..	..	214,736
1968-69	173,759	..	28,104	..	21,560	..	..	..	223,423
1969-70	138,783	..	26,860	..	20,800	..	..	..	186,443
1970-71	85,122	..	19,191	..	27,700	..	..	..	132,013
YIELD PER ACRE (lb)									
1966-67	2,630	..	1,057	..	2,472	..	..	..	2,264
1967-68	3,180	..	1,610	..	2,203	..	..	..	2,793
1968-69	2,907	..	2,108	..	2,589	..	..	..	2,744
1969-70	2,449	..	2,011	..	2,885	..	..	..	2,414
1970-71	1,305	..	1,490	..	3,257	..	..	..	1,524

NOTE. Before 1968-69 production in Queensland relates to the crop harvested in the first of the years mentioned, and in other States to the year following: e.g., for 1967-68, the Queensland crop was harvested during 1967, while the crop in other States was harvested during 1968.

Production of ginned cotton for 1965-66 was 40,885,000 lb; 1966-67, 35,510,000 lb; 1967-68, 70,405,000 lb; and 1968-69, 73,435,000 lb. Figures for 1969-70 and 1970-71 are not yet available.

The gross value of cotton for the five years ended 1970-71 was \$12,468,000; \$19,675,000; \$20,753,000; \$18,979,000; and \$14,015,000 respectively.

Imports of raw cotton (excluding linters) during the past five years were: 1966-67, 19,963,000 lb; 1967-68, 27,066,000 lb; 1968-69, 12,497,000 lb; 1969-70, 10,378,000 lb; and 1970-71, 15,421,000 lb.

Exports of raw cotton (excluding linters) in 1970-71 were 16,351,000 lb, valued at \$3,431,000. Hong Kong and Japan were the principal importing countries.



### Peanuts

Peanuts, or groundnuts, are a sub-tropical legume (and hence summer growers), the pods of which mature beneath the surface of the soil. They thus require well drained, light textured soils. At harvest the plant is pulled, wind-rowed, field-cured for two to four weeks, and then threshed to recover the pods. The main products of the industry are nuts, peanut oil and oil cake.

In Australia, peanuts for crushing for oil arise as a by-product in the production of nuts for edible purposes. The oil is used extensively as a cooking and salad oil and in the manufacture of margarine.

The production of peanuts in Australia is confined mainly to Queensland, although small quantities are grown in New South Wales, the Northern Territory and, in some years, Western Australia.

#### PEANUTS: AREA AND PRODUCTION, STATES, 1966-67 TO 1970-71

Year	Area (Acres)			Production (cwt)		
	N.S.W.	Qld	Aust.	N.S.W.	Qld	Aust.
1966-67 . . . .	397	69,330	(a)69,727	5,194	821,957	(a)827,151
1967-68 . . . .	353	61,373	61,738	3,920	602,207	606,159
1968-69 . . . .	183	78,454	(a)78,637	1,861	332,740	(a)334,601
1969-70 . . . .	232	82,789	(a)83,021	4,039	836,812	(a)840,851
1970-71 . . . .	390	94,304	94,752	5,151	607,172	612,618

(a) Incomplete: excludes Northern Territory.

The gross value of the 1970-71 crop was \$7,998,000 which was approximately \$987,000 less than in 1969-70. Total supplies available for consumption in Australia in 1970-71 were 28,570 tons (in shell equivalent), made up of a decrease in stock held by the Peanut Marketing Board of 6,325 tons, receipts by the Board of 24,435 tons and imports of 50 tons. Exports of peanuts and peanut products for the year were 2,240 tons.

### Flax

The flax plant is a summer-growing annual. Varieties have been developed for the production of either fibre or linseed, which when crushed yields an industrial oil used extensively in the manufacture of paint and linoleum. The introduction of synthetics into these fields has reduced the demand for linseed oil. Flax for the production of fibre was last recorded in 1964-65. Production of linseed during 1970-71 was 30,318 tons.

The main producing areas are the wheat belt of New South Wales, western and north-eastern districts of Victoria, the Esperance district of Western Australia and the Darling Downs in Queensland.

Particulars of area and production of flax for linseed, by States, are given in the following table for the years 1966-67 to 1970-71.

#### FLAX FOR LINSEED: AREA AND PRODUCTION, STATES, 1966-67 TO 1970-71

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Aust.
Area (acres)—						
1966-67 . . . .	9,580	5,012	17,854	389	1,751	34,586
1967-68 . . . .	9,947	9,365	27,764	516	6,886	54,478
1968-69 . . . .	15,164	14,304	21,459	1,025	18,645	70,597
1969-70 . . . .	49,455	18,880	21,513	977	30,812	121,637
1970-71 . . . .	50,751	16,877	8,786	695	25,751	102,860
Production (tons of linseed)—						
1966-67 . . . .	3,265	2,319	7,338	188	634	13,744
1967-68 . . . .	952	804	6,571	72	2,083	10,482
1968-69 . . . .	2,614	5,079	6,132	350	5,321	19,496
1969-70 . . . .	14,499	9,312	5,701	355	6,186	36,053
1970-71 . . . .	16,917	6,370	1,937	254	4,840	30,318

## Hops

Hops are grown from perennial rootstocks over deep, well-drained soils in localities sheltered from the wind. The hop-bearing vine shoots are carried upon wire and coir trellises, from which they are later harvested. The green hops are kiln-dried and bleached with sulphur dioxide fumes, following which the cured hops are pressed into bales.

Hop growing in Australia is confined to the Derwent, Huon and Channel areas of Tasmania and the Ovens and King Valleys in Victoria. A small area is also under hops in Western Australia, near Manjimup, but details are not available for publication.

### Production and imports of hops

The production of hops in Australia is adequate to meet local requirements, and in recent years small quantities have been exported. In the following table details of the production and imports of hops and the quantity of hops used in breweries are shown for each of the years 1966-67 to 1970-71. Exports of hops are negligible and are not recorded separately.

HOPS: PRODUCTION AND DISPOSAL, AUSTRALIA  
1966-67 TO 1970-71

Year	Production(a)		Imports	Net available supplies(b)	Quantity used in breweries
	Quantity	Gross value			
	cwt	\$'000	cwt	cwt	cwt
1966-67	28,907	2,531	2,683	31,590	31,347
1967-68	36,752	3,211	1,370	38,122	30,501
1968-69	42,757	3,788	1,501	44,258	34,077
1969-70	40,319	3,588	357	40,676	34,549
1970-71	33,591	3,133	361	33,952	34,650

(a) Excludes production in Western Australia, for which details are not available for publication.  
(b) Disregards movements in stocks.

## Rapeseed

Rapeseed is obtained from several varieties of brassica, which are cultivated in temperate and warm temperate zones for their oil producing seed.

The introduction of wheat quotas in Australia and the buoyant world market for oilseeds has brought about an expansion of areas sown to rape in the past three years in New South Wales, Western Australia, Victoria and South Australia.

Domestic production has increased from 88,000 cwt in 1969-70 to 662,000 cwt in 1970-71 with the major part of the production for that year being derived from Victoria.

Rapeseed oil is used mainly as a salad and cooking oil with some minor amounts being utilised for industrial purposes. A protein meal is derived as a by-product in the crushing process.

## Safflower

The cultivation of safflower in Australia has developed rapidly in recent years to make it one of the major oilseed crops. It is best cultivated either in the warm temperate zones or as a winter crop in the tropical or sub-tropical regions, on moderately fertile, weed-free, clay or sandy loams. Adequate moisture is required up to the flowering stage, after which it is relatively drought resistant. The soil preparation and sowing techniques are similar to those employed for small grains; it is usually harvested by combine when the seed is hard and dry. The oil, produced by crushing, is used in the manufacture of margarine, soaps, paints, varnishes, enamels, and textiles.

The downward trend evident in Queensland production in 1969-70 continued during 1970-71, when production dropped a further 47,008 bushels from the 1969-70 level to 20,462 bushels. In New South Wales and Victoria however, because of crop diversification away from wheat, production increased by 250,305 bushels and 76,608 bushels respectively, to record levels of 406,184 bushels for New South Wales and 76,872 bushels for Victoria.

## SAFFLOWER: AREA AND PRODUCTION, STATES AND TERRITORIES, 1966-67 TO 1970-71

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
AREA (ACRES)									
1966-67	5,092	729	88,803	(a)	(a)	..	..	..	(b)94,624
1967-68	8,550	489	95,351	(a)	225	..	..	..	(b)104,615
1968-69	2,415	199	43,589	..	170	..	..	..	46,373
1969-70	16,022	50	9,475	(a)	1,203	..	..	..	(b)26,750
1970-71	49,012	12,530	5,073	420	1,349	..	..	..	68,384
PRODUCTION (BUSHELS)(c)									
1966-67	71,823	7,336	1,290,087	(a)	(a)	..	..	..	(b)1,369,246
1967-68	59,310	1,375	815,354	(a)	2,207	..	..	..	(b)878,246
1968-69	14,963	1,268	552,555	..	1,153	..	..	..	569,939
1969-70	155,879	164	67,470	(a)	5,994	..	..	..	(b)229,507
1970-71	406,184	76,872	20,462	4,042	7,828	..	..	..	515,388

(a) Not available for publication.

(b) Incomplete; see individual States.

(c) 40 lb per bushel.

Imports of crude safflower seed oil in 1969-70 and 1970-71 totalled 490,500 gallons and 1,636,000 gallons respectively. These imports came mainly from the United States of America.

### Sunflower seed

Sunflowers are summer growing annuals produced mainly under raingrown conditions in the three eastern mainland States of Australia.

The seed for which the plant is cultivated yields a high quality dual purpose oil and a by-product protein meal used for stockfeed. Main uses for the oil are in the manufacture of margarine, as a salad and cooking oil, and for industrial purposes.

The introduction of wheat quotas and the development of high oil yielding varieties of sunflower seed have resulted in an increase in Australian production from 35,000 cwt in 1967-68 to 1,160,000 cwt in 1970-71.

## Vegetables for human consumption

### Area, production and trade

Vegetables were initially grown on a large scale near the main cities, where there was ready access to reliable water supplies and to markets. Later, the expansion of irrigation areas and improvement in transport services resulted in their production being extended into many other areas. At present, because of the wide diversity of climatic conditions across Australia, supplies for main city markets are drawn from widely different areas, depending upon the times of maturity of the various crops. Apart from potatoes and onions, which are sold in some States through marketing boards, the bulk of vegetable trading takes place at the metropolitan markets of the cities concerned.

Details of the areas planted and production of individual kinds of vegetables are shown below for the seasons 1968-69 to 1970-71. Certain particulars shown are incomplete in that details for specific vegetables in some States are either not available or are not available for publication. For further information see the bulletin *Rural Industries*. Details of the estimated consumption of vegetables for a series of years ending 1970-71 are given in the chapter Miscellaneous.

## VEGETABLES FOR HUMAN CONSUMPTION: AUSTRALIA, 1968-69 TO 1970-71

Vegetable	1968-69		1969-70		1970-71	
	Area sown	Pro-duction	Area sown	Pro-duction	Area sown	Pro-duction
	acres	tons	acres	tons	acres	tons
Asparagus . . . . .	4,148	6,270	4,094	5,201	4,637	5,194
Beans, French and runner . . . . .	19,745	37,607	20,018	39,243	18,512	33,342
Beans, navy . . . . .	10,016	833	13,013	2,491	11,426	1,103
Beetroot . . . . .	2,188	19,441	2,140	22,650	1,890	19,062
Cabbages and brussel sprouts . . . . .	6,421	72,899	6,388	68,830	6,292	70,066
Carrots . . . . .	6,969	78,198	7,295	80,819	7,524	83,392
Cauliflowers . . . . .	6,334	68,971	6,881	92,348	6,550	77,550
Celery . . . . .	911	15,576	1,023	16,882	955	15,314
Cucumbers . . . . .	2,106	9,758	2,380	10,098	2,306	10,833
Lettuce . . . . .	5,405	24,881	5,557	31,638	5,386	25,695
Onions . . . . .	11,307	86,145	10,299	84,177	10,710	91,483
Parsnips . . . . .	1,308	14,417	1,366	12,022	1,223	11,236
Peas, blue . . . . .	3,357	2,129	3,952	3,205	5,121	5,427
Peas, green . . . . .	60,964	117,947	62,138	135,257	40,146	80,005
Potatoes . . . . .	113,437	798,478	107,062	749,763	95,404	735,173
Tomatoes . . . . .	17,479	154,317	17,819	160,339	18,181	173,472
Turnips, swede and white . . . . .	1,983	9,170	1,748	7,007	1,945	8,664
All other . . . . .	37,091	..	37,834	..	43,597	..
<b>Total . . . . .</b>	<b>311,169</b>	<b>..</b>	<b>311,007</b>	<b>..</b>	<b>281,805</b>	<b>..</b>

**Processed vegetables**

Total production of canned vegetables in 1970-71 amounted to 196,461,000 lb. The principal types produced were baked beans (including pork and beans), 48,221,000 lb; beetroot, 44,008,000 lb; green peas (excluding mint processed peas), 16,938,000 lb; tomatoes, 16,636,000 lb; asparagus, 10,058,000 lb and sweet corn, 9,738,000 lb.

The production of dehydrated vegetables, including split peas, during 1968-69 amounted to 12,959,000 lb. Figures for 1969-70 and 1970-71 are not yet available. Production of potato crisps, chips and flakes during 1970-71 was 29,431,000 lb.

There has been rapid development in the quick-frozen vegetable industry. Data were collected for the first time in 1957-58, when 13,846,000 lb of frozen vegetables were produced, made up principally of 10,131,000 lb of peas and 2,540,000 lb of beans. In 1970-71 the production was 131,643,000 lb, of which 60,446,000 lb were peas and 31,365,000 lb were beans.

**Exports and imports of vegetables**

Overseas exports of fresh and frozen vegetables during 1970-71 amounted to 62,463,000 lb valued at \$3,843,000; dried vegetables, 32,334,000 lb valued at \$1,356,000; preserved vegetables, 5,310,000 lb valued at \$1,302,000; and other prepared or preserved vegetables, 310,000 lb valued at \$115,000.

Imports of fresh and frozen vegetables during 1970-71 amounted to 9,053,000 lb valued at \$1,502,000.

**Potatoes**

This crop requires deep friable soils, which in Australia are usually basaltic, alluvial or swampy in origin. Fertiliser requirements, which are generally high, vary with the type of soil. Potatoes are killed by heavy frost, but require only moderate temperatures for growth. Mechanical planters and diggers are used to a variable extent depending upon a variety of factors including terrain, state of the soil and scale of operations. Seed certification schemes, which operate in all States except Queensland, provide a supply of seed which is free from viral, fungal and bacterial diseases. In Australia potatoes are used almost entirely for human consumption and not for the production of starch or alcohol. They are rarely used as stock feed.

*Area, production, and yield per acre.* Victoria possesses particular advantages for the growing of potatoes, as the rainfall is generally satisfactory and the climate is unfavourable to the spread of Irish blight; consequently, the crop is widely grown. The principal areas of that State are the central highlands and the south-western and Gippsland districts. New South Wales and Queensland come next in order of acreage sown. In New South Wales production is chiefly in the tablelands district.



POTATOES: AREA, PRODUCTION AND YIELD PER ACRE  
STATES AND TERRITORIES, 1966-67 TO 1970-71

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
AREA (ACRES)									
1966-67 . .	23,594	37,167	16,227	5,948	6,100	10,278	(a)	14	(b)99,328
1967-68 . .	24,334	40,329	17,347	6,527	6,149	10,960	(a)	22	(b)105,668
1968-69 . .	29,236	39,979	18,515	7,643	6,588	11,461	(a)	15	(b)113,437
1969-70 . .	25,865	39,765	17,712	8,021	6,332	9,367	(a)	(a)	(b)107,062
1970-71 . .	22,102	34,965	15,925	7,160	6,246	8,994	(a)	12	(b)95,404
PRODUCTION (TONS)									
1966-67 . .	126,183	225,186	93,738	60,271	64,169	73,300	(a)	120	(b)642,967
1967-68 . .	122,795	215,941	106,429	63,331	70,469	79,058	(a)	89	(b)658,112
1968-69 . .	160,823	299,961	122,990	68,018	74,435	72,120	(a)	131	(b)798,478
1969-70 . .	142,047	279,553	115,455	78,624	67,164	66,920	(a)	(a)	(b)749,763
1970-71 . .	143,387	272,200	108,659	71,380	68,058	71,444	(a)	45	(b)735,173
YIELD PER ACRE (TONS)									
1966-67 . .	5.35	6.06	5.78	10.13	10.52	7.13	(a)	8.57	(b)6.47
1967-68 . .	5.05	5.35	6.14	9.70	11.46	7.21	(a)	4.05	(b)6.23
1968-69 . .	5.50	7.50	6.64	8.90	11.30	6.29	(a)	8.73	(b)7.04
1969-70 . .	5.49	7.03	6.52	9.80	10.61	7.14	(a)	(a)	(b)7.00
1970-71 . .	6.49	7.78	6.82	9.97	10.90	7.94	(a)	3.75	(b)7.71

(a) Not available for publication.

(b) Incomplete; see individual territories.

The production of potatoes from 1935-36 is shown in plate 44, below.

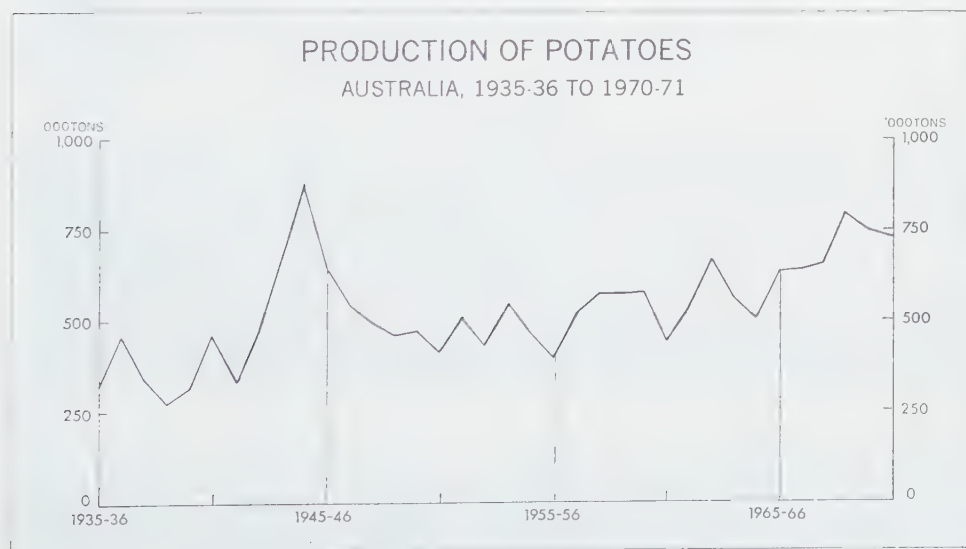


PLATE 44

*Potato marketing boards* were established in all States except Tasmania under separate State legislation after Commonwealth control of potato marketing under war-time legislation ceased at the end of 1948. The life of the Queensland Board was not extended when its term ended in 1954. The New South Wales Board was voted out by growers in 1956, and the Victorian Board also ceased functioning in that year. The Boards in South Australia and Western Australia are the only statutory boards still in operation.

*Value of potato crop.* The estimated gross value of the potato crop of each State for the 1970-71 season and the value per acre are shown in the following table.

POTATOES: VALUE OF CROP, STATES, 1970-71

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.(a)
Aggregate value	\$'000	10,395	20,916	10,474	6,059	6,299	3,013	57,181
Value per acre	\$	470.32	598.20	657.71	846.23	1,008.49	335.00	599.36

(a) Excludes Australian Capital Territory.

*Consumption and exports of potatoes.* The annual consumption of potatoes in Australia during each of the three years 1968-69 to 1970-71 amounted to 729,500 tons, 679,300 tons and 675,900 tons respectively or 134.3 lb, 122.3 lb and 119.1 lb respectively per head of population. These figures exclude the quantities used for seed, which averaged about 55,000 tons annually over this period. Details showing exports and imports for the years 1966-67 to 1970-71 are given in the following table.

POTATOES: EXPORTS AND IMPORTS, AUSTRALIA, 1966-67 TO 1970-71

Year	Exports		Imports	
	Quantity	Value	Quantity	Value
		\$'000		\$'000
	tons	f.o.b.	tons	f.o.b.
1966-67	13,593	839	..	..
1967-68	8,150	693	..	..
1968-69	12,591	966	237	12
1969-70	20,583	1,474	..	..
1970-71	11,475	978	..	..

Western Australia has emerged in recent years as the principal exporting State, accounting for almost half of the Australian total in 1970-71. Australia's principal markets are Singapore, Papua New Guinea, Ceylon and New Caledonia.

## Fruit

The varieties of fruit grown differ in various parts of the States, ranging from pineapples, papaws and mangoes in the tropics to strawberries, raspberries and currants in the colder parts of the temperate zone. In New South Wales citrus fruit (oranges, lemons, etc.) and bananas are the principal crops, although apples, peaches, plums, pears and cherries are grown extensively. The principal varieties grown in Victoria are apples, pears, peaches, oranges, and apricots. In Queensland apples, pineapples, bananas, oranges, mandarins, peaches and plums are the major fruits cultivated. In South Australia, in addition to oranges, apples, peaches, apricots, and pears, almonds and olives are grown extensively. In Western Australia apples, oranges, plums, and pears are the chief varieties. In Tasmania apples are by far the most important type of fruit grown, but small fruit, such as currants, raspberries and gooseberries, are also grown extensively, the balance of the area being mainly taken up with pears and apricots.

### Apple and Pear Industry

Early in October 1971 the Government approved a stabilisation plan for the export of apples and pears at "risk", with an estimated Commonwealth liability of \$10 million over 5 years, commencing with the 1971 season. The plan establishes average seasonal returns (including the returns from forward sales) for each variety, which are then compared with the agreed support price for each variety and the extent of the deficiency or surplus is determined.

**Overseas marketing of fruits**

Details of the overseas marketing of fruits were published in Year Book No. 55 and earlier issues.

**Area and production of fruit**

The total area under fruit in Australia in 1970-71 was 304,637 acres, 2.7 per cent less than the record acreage established in 1965-66.

**FRUIT: AREA(a), STATES AND TERRITORIES, 1966-67 TO 1970-71**  
(Acres)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1966-67	96,482	73,519	50,058	44,157	26,458	22,343	133	38	313,188
1967-68	95,798	71,158	51,391	45,113	25,598	21,762	98	37	310,955
1968-69	94,685	71,598	52,750	44,497	25,366	21,429	90	32	310,447
1969-70	95,326	70,883	53,048	44,801	24,130	21,157	71	38	309,454
1970-71	93,167	66,614	54,752	45,302	23,791	20,853	120	38	304,637

(a) Bearing and not bearing.

**ORCHARD FRUIT (INCLUDING EDIBLE TREE NUTS), TOTAL NUMBER OF TREES**  
**STATES AND TERRITORIES, 1970-71**  
(\*000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Pome—									
Apples	1,813	1,933	1,356	674	1,264	2,654	..	4	9,698
Pears	286	1,770	123	206	84	181	..	..	2,649
Quinces	4	6	..	3	..	..	..	..	15
Citrus—									
Oranges	2,708	636	262	1,513	370	..	3	..	5,491
Lemons and limes	312	109	39	93	42	..	..	..	597
Mandarins	228	61	239	88	55	..	..	..	671
Grapefruit	84	33	18	55	11	..	..	..	202
Stone—									
Apricots	161	326	56	434	21	50	..	..	1,047
Cherries	332	214	1	67	4	8	..	..	627
Nectarines	47	44	47	27	8	3	..	..	177
Olives	14	88	..	62	23	..	..	..	187
Peaches	733	1,332	179	452	68	5	..	(a)	(b)2,769
Plums and prunes	506	168	162	81	87	6	..	(a)	(b)1,009
Nuts—									
Almonds	3	19	..	618	2	..	..	(a)	(b)642
Macadamia	31	..	110	..	..	..	..	..	141
Walnuts	1	8	..	4	3	..	..	..	17
Other orchard n.e.i.—									
Custard apples	..	..	16	..	..	..	..	..	17
Figs	4	2	1	8	1	..	..	..	16
Mangoes	1	..	47	..	1	..	1	..	49

(a) Not available for publication.

(b) Incomplete, see individual States.

**ORCHARD FRUIT (INCLUDING EDIBLE TREE NUTS), PRODUCTION  
STATES AND TERRITORIES, 1970-71**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Pome—	bus	bus	bus	bus	bus	bus	bus	bus	bus
Apples . . .	4,016	5,079	2,025	1,583	3,156	7,373	..	6	23,238
Pears . . .	736	7,061	172	649	177	397	..	..	9,192
Quinces . . .	8	15	..	6	1	..	..	..	31
Citrus—									
Oranges . . .	6,321	1,785	840	5,377	480	..	2	..	14,804
Lemons and limes . .	650	236	172	146	149	..	1	..	1,355
Mandarins . . .	252	110	412	126	55	..	..	..	956
Grapefruit . . .	275	134	41	126	17	..	1	..	593
Stone—									
Apricots . . .	367	677	54	1,274	26	26	..	..	2,425
Cherries . . .	173	184	..	50	1	1	..	..	410
Nectarines . . .	54	36	38	28	8	1	..	..	166
Olives . . .	11	59	..	22	10	..	..	..	103
Peaches . . .	1,526	2,925	179	1,283	97	2	..	(a)	(b)6,012
Plums and prunes . .	365	176	158	85	121	5	..	(a)	(b)909
Nuts—	'000 lb	'000 lb	'000 lb	'000 lb	'000 lb	'000 lb	'000 lb	'000 lb	'000 lb
Almonds . . .	6	11	..	3,005	3	..	..	(a)	(b)3,024
Macadamia . . .	53	..	109	..	..	..	..	..	162
Walnuts . . .	9	270	..	48	19	..	..	..	347
Other orchard n.e.i.—	'000	'000	'000	'000	'000	'000	'000	'000	'000
Custard apples . . .	bus	bus	bus	bus	bus	bus	bus	bus	bus
Figs . . .	15	2	..	12	1	..	..	..	30
Mangoes . . .	..	..	81	..	1	..	1	..	83

(a) Not available for publication.

(b) Incomplete; see Individual States.

**BERRY AND OTHER FRUITS (EXCLUDING VINEYARDS): STATES AND  
TERRITORIES, 1970-71**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>TOTAL AREA BEARING AND NOT BEARING (ACRES)</b>									
Small and berry fruit—									
Currants (black, red) . . .	..	..	..	(a)	..	691	..	..	(b)691
Raspberries . . .	..	146	..	18	..	631	..	..	795
Strawberries . . .	93	470	288	179	22	60	..	..	1,112
Other . . .	34	219	22	15	3	147	..	..	440
Other fruit—									
Bananas . . .	18,849	..	6,083	..	403	..	(a)	..	(b)25,335
Papaws . . .	17	..	1,243	..	1	..	(a)	..	(b)1,261
Passionfruit . . .	408	72	736	..	123	..	..	..	1,339
Pineapples . . .	181	..	15,695	..	1	..	(a)	..	(b)15,877

**PRODUCTION**

	cwt	cwt	cwt	cwt	cwt	cwt	cwt	cwt	cwt
Small and berry fruit—									
Currants (black, red) . . .	..	..	..	(a)	..	19,973	..	..	(b)19,973
Raspberries . . .	..	3,410	..	473	..	26,385	..	..	30,267
Strawberries . . .	4,013	29,816	20,100	12,695	1,431	1,152	..	..	69,207
	'000	'000	'000	'000	'000	'000	'000	'000	'000
Other fruit—	bus	bus	bus	bus	bus	bus	bus	bus	bus
Bananas . . .	3,789	..	1,282	..	65	..	7	..	5,142
Papaws . . .	3	..	445	..	..	..	(a)	..	(b)448
Passionfruit . . .	37	3	140	..	7	..	..	..	187
Pineapples . . .	45	..	7,363	..	..	..	(a)	..	(b)7,408

(a) Not available for publication.

(b) Incomplete; see individual States.



## Principal fruit crops

## PRINCIPAL FRUIT CROPS: PRODUCTION, AND GROSS VALUE OF PRODUCTION, AUSTRALIA, 1966-67 TO 1970-71

Year	Apples	Apricots	Bananas	Oranges	Peaches	Pears	Pineapples	Plums and prunes
PRODUCTION ('000 BUSHELS)								
1966-67.	19,418	2,405	4,901	10,677	5,913	6,557	6,059	1,204
1967-68.	19,615	1,519	5,145	9,846	6,294	7,351	6,804	778
1968-69.	22,174	2,004	4,940	12,137	5,280	5,245	6,363	904
1969-70.	22,259	1,814	5,160	10,787	5,513	9,331	6,344	985
1970-71.	23,238	2,425	5,142	14,804	6,012	9,192	7,408	909
GROSS VALUE OF PRODUCTION (\$'000)								
1966-67.	52,108	6,912	20,319	25,327	13,912	15,913	7,137	5,149
1967-68.	49,741	4,637	19,636	24,496	14,123	16,469	6,470	3,362
1968-69.	56,146	6,992	19,128	26,095	12,685	13,512	7,482	4,697
1969-70.	56,120	7,438	24,961	29,026	15,101	23,809	7,144	5,828
1970-71.	58,339	9,392	20,033	33,029	15,760	20,855	9,722	6,360

## Production and consumption of jams and jellies and preserved fruit

In Australia considerable quantities of fruit are used in the production of jams and jellies and for preserving. The statistics of fruit usage in factories for 1968-69, 1969-70 and 1970-71 are not yet available. However, during 1970-71 output of jams, conserves, fruit spreads, etc., amounted to 85,228,000 lb, while output of preserved fruit amounted to 659,825,000 lb. Of the latter figure, peaches accounted for 213,807,000 lb, pears 159,314,000 lb, and pineapples 76,279,000 lb.

In 1967-68, 9,102,000 cwt of fruit was recorded as used in factories classified to the sub-classes Oils, vegetable; Jam, fruit and vegetable canning; Condiments, coffee, spices; Aerated waters and cordials; and Dehydrated fruit and vegetables. Figures for 1968-69, 1969-70 and 1970-71 are not yet available. Details of the estimated consumption of fruit and fruit products for a series of years ending 1970-71 are shown in Chapter 29, Miscellaneous.

## Imports and exports of fruit and fruit products

The imports of fresh fruit into Australia are negligible, while those of dried fruit consists mainly of dates, approximately 90 per cent of which are obtained from Iraq and Iran; the bulk of the remainder coming from the United States of America. A considerable export trade in fresh and chilled, and dried fruit is carried on by Australia with overseas countries. The values of the shipments in 1970-71 amounted to \$32,012,000 and \$20,048,000 respectively. Apples constitute the bulk of the fresh fruit exported, although exports of pears and citrus fruits are considerable.

## FRESH AND CHILLED FRUIT: EXPORTS, AUSTRALIA, 1966-67 TO 1970-71

Year	Apples		Pears		Citrus		Total value(a)
	Quantity	Value	Quantity	Value	Quantity	Value	
	'000lb	\$'000 f.o.b.	'000lb	\$'000 f.o.b.	'000lb	\$'000 f.o.b.	\$'000 f.o.b.
1966-67	288,834	18,280	64,620	4,800	58,656	3,779	27,869
1967-68	277,814	17,368	68,922	5,442	54,875	3,656	27,535
1968-69	287,135	19,964	46,652	4,107	68,312	4,423	29,456
1969-70	296,806	20,410	81,324	6,486	48,113	3,216	31,011
1970-71	313,219	21,881	76,029	6,411	59,520	3,721	32,012

(a) Includes exports of all other fresh and chilled fruit.

The quantity and value of overseas imports and exports of dried fruit, other than sultanas, raisins and currants, for the years 1966-67 to 1970-71 are shown below.

**DRIED TREE FRUIT(a): IMPORTS AND EXPORTS, AUSTRALIA  
1966-67 TO 1970-71**

Year	Imports(b)		Exports	
	Quantity	Value	Quantity	Value
	'000 lb	\$'000 f.o.b.	'000 lb	\$'000 f.o.b.
1966-67 . . .	8,936	671	8,038	2,037
1967-68 . . .	8,996	750	8,027	2,016
1968-69 . . .	9,942	843	5,401	2,087
1969-70 . . .	11,728	1,113	4,828	1,716
1970-71 . . .	8,530	956	5,003	1,532

(a) Excludes sultanas, raisins and currants dealt with separately under Vineyards (see pages 792-3). (b) Dates and figs only.

Exports of jams and jellies in 1970-71 were 6,160,000 lb valued at \$1,032,000, compared with 6,036,000 lb, valued at \$909,000 in 1969-70. Imports of jams and jellies in 1970-71 were 5,546,000 lb, valued at \$877,000, compared with 4,574,000 lb, valued at \$813,000 in 1969-70.

Large quantities of canned or bottled fruit are normally exported from Australia, the quantity recorded in 1970-71 being 326,799,000 lb, valued at \$42,891,000. Exports in 1970-71 were made up principally of peaches (110,201,000 lb), pears (113,266,000 lb), fruit salad (47,129,000 lb), pineapples (13,667,000 lb), and apricots (14,765,000 lb). In addition, the exports of pulped fruits during 1970-71 amounted to 1,386,000 lb valued at \$212,000.

The total value of preserved fruit and fruit preparations (including fruit juices) imported into Australia during 1970-71 was \$4,645,000. The value of exports of fruit juices in 1970-71 was \$1,048,000.

### Vineyards

Grapes require a warm to hot climate and a predominantly winter rainfall. Freedom from late spring frosts is essential. They are grown for wine-making, drying and, to a minor extent, for table use. In Australia wine is produced very largely from irrigated crops, as are dried fruits. Some of the better known wine producing areas are the Murray Valley (South Australia and Victoria), Barossa Valley and Southern Vales Areas (South Australia), the Murrumbidgee Irrigation Areas and the Hunter Valley (New South Wales), the Mildura, Rutherglen and Stawell districts of Victoria, and the Swan Valley (Western Australia). Nearly all the dried fruit is produced along the River Murray and its tributaries, with small localised areas in other States.

#### Area of vineyards

The area under vineyards in the 1970-71 season in Victoria and South Australia constituted 76 per cent of the total area of vineyards.

**VINEYARDS: AREA(a), STATES, 1966-67 TO 1970-71  
(Acres)**

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Aust.
1966-67 . . .	21,257	49,164	3,304	57,080	7,945	138,750
1967-68 . . .	22,155	48,725	3,400	58,129	7,665	140,074
1968-69 . . .	22,749	48,970	3,508	60,574	7,270	143,071
1969-70 . . .	25,422	49,838	3,614	64,837	6,648	150,359
1970-71(b)—						
Drying . . .	7,754	36,961	..	4,032	(c)2,262	51,009
Table . . .	2,550	3,528	3,564	209	(c)1,067	10,918
Wine . . .	17,488	10,444	282	64,091	(c)3,379	95,684
Total . . .	27,792	50,933	3,846	68,332	6,708	157,611

(a) Bearing and not bearing.  
are put.

(b) Area of individual categories is shown according to ultimate use to which grapes are put. (c) Estimated.

### Wine industry

Australia produces wine of every type and also brandy. In recent years there has been a distinct trend towards greater consumption and production of unfortified or table wines. Until 1957-58 production of these wines (which include burgundy, claret, riesling, sauterne, and sparkling wines) was less than half that of the fortified varieties (sherries, ports, etc.). By 1968-69 production of table wines had exceeded the volume of fortified varieties and in 1970-71, production of unfortified wines exceeded fortified wines by 5.6 million gallons.

*The Wine Overseas Marketing Act* 1929-1966 was introduced to place the overseas marketing of wine on an orderly basis. The Australian Wine Board, consisting of representatives from wineries and distilleries, grape growers and the Commonwealth Government, supervises the sale and distribution of Australian wine exported and recommends conditions under which export licences should be issued. The Board also engages in wine publicity and trade promotion activities both in Australia and overseas. In London the Board maintains an Australian Wine Centre, which is a medium for promoting interest in Australian wines and brandy. It is also a retail shop for the sale of these products. *The Wine Grapes Charges Act* 1929-1969 provides for the imposition of a levy on all grapes used in Australia for the manufacture of wine, brandy and spirit used for fortifying wine. The proceeds of the levy are used to meet the Board's projects in Australia and overseas and to defray the administrative expenses of the Board, which has no other source of income.

### Production and consumption of wine and brandy

In 1970-71 the total production of wine (beverage and distillation) in Australia was 55.3 million gallons, while total consumption of beverage wine was 24.4 million gallons (1.9 gallons per head of population). Similar particulars for 1969-70 are 63.1 million gallons and 24.4 million gallons (2.0 gallons per head of population) respectively.

WINE: PRODUCTION(a), STATES, 1966-67 TO 1970-71  
( '000 gallons)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Aust.
1966-67	7,893	3,555	37	29,324	924	41,734
1967-68	8,350	5,180	31	30,055	829	44,444
1968-69	8,597	6,241	32	36,186	1,056	52,111
1969-70	11,529	7,251	31	43,301	1,015	63,127
1970-71	10,376	6,616	32	37,233	999	55,257

(a) Beverage and distillation wine; includes farm wine in New South Wales, Queensland and Western Australia.

BRANDY: PRODUCTION, SOUTH AUSTRALIA  
AND AUSTRALIA, 1966-67 TO 1970-71  
(Proof gallons)

Year	S.A.	Aust.(a)
1966-67	650,618	791,163
1967-68	715,147	872,428
1968-69	848,225	1,068,030
1969-70	1,140,010	1,257,781
1970-71	1,346,708	1,482,573

(a) Includes New South Wales and Victoria, for which separate details are not available for publication.

### Exports and imports of wine and brandy

Principal markets for exports of Australian wine are the United Kingdom, Canada and New Zealand. During 1970-71 these countries received 458,000 gallons, 476,000 gallons and 91,000 gallons respectively. Exports of Australian-produced wine for the five years ended 1970-71 are shown in the following table.

## WINE: EXPORTS, AUSTRALIA, 1966-67 TO 1970-71

Year	Quantity ('000 gals)			Value (\$'000 f.o.b.)		
	Sparkling	Other	Total	Sparkling	Other	Total
1966-67 . . .	65	1,709	1,774	251	2,917	3,169
1967-68 . . .	88	1,751	1,839	359	2,794	3,153
1968-69 . . .	73	1,729	1,802	314	3,081	3,395
1969-70 . . .	83	1,212	1,295	348	2,565	2,913
1970-71 . . .	87	1,357	1,444	391	3,190	3,581

Imports of wine for 1970-71 amounted to 526,000 gallons valued at \$2,582,000, compared with 430,000 gallons valued at \$1,922,000 in the previous year. During 1970-71 Italy supplied 168,000 gallons valued at \$675,000, France 108,000 gallons valued at \$950,000 and Portugal 113,000 gallons valued at \$365,000.

Exports of Australian-produced brandy in 1970-71 amounted to 80,000 proof gallons, valued at \$485,000. Imports of brandy, mainly from France, amounted to 261,000 proof gallons, valued at \$1,375,000.

## Dried vine fruit industries

The dry period from November to March in the lower Murray valley makes this an ideal area for dried vine fruit. Harvesting for drying takes place at the end of summer. The sun-drying process is often accelerated by using a dip of cold potash.

The *Dried Fruits Export Control Act* 1924-1966. For details of the *Dried Fruits Export Control Act* 1924-1966 see Year Book No. 55, page 877, and earlier issues.

For details of the bulk purchase agreements between the Governments of the United Kingdom and Australia which operated during the period 1946-53 see Year Book No. 40, page 888. From 1 December 1953 exports to the United Kingdom have been on a trader to trader basis.

In June 1963, Australian, Greek and Turkish dried vine fruit interests concluded an agreement to maintain minimum prices for sultanas on world markets. The agreement has been periodically reviewed. At the Ninth Conference in London in June 1971, representatives of the signatory countries (which had included South Africa from 1970) met for the last time as parties to the agreement and formally resolved it out of existence. Despite this it was agreed that contacts between the producing countries would continue and that they would meet again in June 1972.

The *Dried Vine Fruits Stabilization Act* 1964-1966. For details of the first Dried Vine Fruits Stabilization Scheme, which expired with the disposal of the 1968 crop, see Year Book No. 55, page 877, and earlier issues. A referendum of eligible dried vine fruit producers was held in September 1971 concerning a new five-year stabilisation plan for the dried vine fruits industry. The result of this referendum was that growers were in favour of the introduction of a new plan. Accordingly, legislation was brought down and received the Royal Assent on 16 December 1971. The plan operates as from the 1971 season for a period of five years.

## DRIED VINE FRUIT: PRODUCTION, STATES, 1966-67 TO 1970-71

(Tons)

Year	N.S.W.		Vic.		S.A.		W.A.		Aust.	
	Raisins (a)	Cur- rants	Raisins (a)	Cur- rants	Raisins (a)	Cur- rants	Raisins (a)	Cur- rants	Raisins (a)	Cur- rants
1966-67 . . .	14,108	643	69,628	3,588	13,544	3,773	67	1,353	97,347	9,357
1967-68 . . .	12,119	505	59,222	3,166	5,200	3,112	40	1,668	76,581	8,451
1968-69 . . .	7,829	428	37,896	2,687	1,743	2,261	8	1,862	47,476	7,238
1969-70 . . .	14,118	651	67,070	3,383	3,169	3,325	8	1,068	84,365	8,427
1970-71 . . .	9,240	630	40,585	3,034	1,313	3,150	29	1,489	51,167	8,303

(a) Includes sultanas and lexias.



## DRIED VINE FRUIT(a): EXPORTS, AUSTRALIA, 1966-67 TO 1970-71

Year	Raisins, sultanas and lexias		Currants		Total	
	Quantity	Value	Quantity	Value	Quantity	Value
		\$'000		\$'000		\$'000
	tons	f.o.b.	tons	f.o.b.	tons	f.o.b.
1966-67 . . .	63,561	19,720	4,301	1,428	67,862	21,148
1967-68 . . .	63,562	19,459	3,907	1,316	67,469	20,775
1968-69 . . .	58,070	18,310	3,437	1,203	61,507	19,513
1969-70 . . .	40,631	13,383	2,793	979	43,424	14,362
1970-71 . . .	54,857	17,194	4,194	1,322	59,051	18,516

(a) Excludes quantities exported as mincemeat.

The chief countries importing Australian dried vine fruit are the United Kingdom, Canada, the Federal Republic of Germany, and New Zealand. The quantities exported to these countries in 1970-71 were 22,013 tons, 12,061 tons, 10,935 tons and 4,536 tons respectively.

## Table grapes

Grapes for table use are grown in all States except Tasmania, but the area of this type was only about 7 per cent of the productive area of vines in 1970-71. The quantities of table grapes produced during the season 1970-71 in each State are shown on page 747.

## PASTORAL PRODUCTION

## Livestock numbers

A detailed account of the various enumerations of livestock in Australia made prior to 1860 was given on page 748 of Year Book No. 35. Since 1860 annual enumerations have been made, based, with few exceptions, on actual collections made through the agency of the State police or by post. Particulars concerning the numbers of each of the principal kinds of livestock in Australia, at decennial intervals from 1860 to 1960, and from 1967 onwards in single years, are given in the following table, and are shown continuously since 1870 on the graph on plate 45, page 795.

LIVESTOCK: AUSTRALIA, 1860 TO 1971  
(<sup>'000</sup>)

Year	Horses	Cattle	Sheep	Pigs	Year	Horses	Cattle	Sheep	Pigs
1860 .	432	3,958	20,135	351	1940 .	1,699	13,080	119,305	1,455
1870 .	717	4,276	41,594	543	1950 .	1,057	14,640	112,891	1,123
1880 .	1,069	7,527	62,184	816	1960 .	640	16,503	155,174	1,424
1890 .	1,522	10,300	97,881	891	1967 .	n.a.	18,270	164,237	1,804
1900 .	1,610	8,640	70,603	950	1968 .	n.a.	19,218	166,912	2,056
1910 .	2,166	11,745	98,066	1,026	1969 .	n.a.	20,611	174,605	2,253
1920 .	2,416	13,500	81,796	764	1970 .	456	22,162	180,080	2,398
1930 .	1,793	11,721	110,568	1,072	1971 .	n.a.	24,373	177,792	2,590

While livestock numbers (particularly sheep) have increased substantially since 1860, marked fluctuations have taken place during the period, mainly on account of widespread droughts which have from time to time left their impressions on the pastoral history of Australia. These occurred in 1868, 1877, 1883-84, 1892, 1893, 1895, 1901-2, 1912, 1914, 1918, 1919, 1922-23, 1925-26, 1927-28, 1929-30, 1940-41, 1944-45 to 1946-47, and 1965-67. The years in which the numbers of livestock attained their peaks are as follows: horses, 1919 (2,527,000); cattle, 1971 (24,373,000); sheep, 1970 (180,080,000); and pigs, 1971 (2,590,000).

The distribution throughout Australia of sheep, beef cattle, dairy cattle and pigs at 31 March 1963 is shown in the maps on pages 1049 and 1050 and facing pages 1082 and 1083 of Year Book No. 50.

The numbers of horses, cattle, sheep, and pigs in each State and Territory are shown later in this chapter.

### Value of pastoral production and indexes of quantum and price

Values of pastoral production are shown for 1970-71 in the table following. Further details of values of pastoral production and indexes of quantum and price, together with details of the source of the information and an explanation of the terms used in this compilation will be found in Chapter 29, Miscellaneous.

**GROSS, LOCAL AND NET VALUES OF PASTORAL PRODUCTION: STATES AND TERRITORIES, 1970-71**  
(\$'000)

<i>State or Territory</i>	<i>Gross production valued at principal markets</i>	<i>Marketing costs</i>	<i>Local value of production</i>	<i>Value of materials used in process of production</i>	<i>Net value of production(a)</i>
New South Wales . . . .	416,413	48,534	367,879	(b)50,499	317,380
Victoria . . . . .	354,607	29,245	325,362	52,228	273,134
Queensland . . . . .	229,660	22,257	207,404	37,003	170,401
South Australia . . . . .	123,858	8,880	114,978	20,261	94,717
Western Australia . . . . .	146,198	14,712	131,486	30,001	101,485
Tasmania . . . . .	34,459	2,910	31,549	10,518	21,031
Northern Territory . . . . .	22,039	3,403	18,636	n.a.	18,636
Australian Capital Territory . . . .	1,674	148	1,526	126	1,401
<b>Australia . . . . .</b>	<b>1,328,908</b>	<b>130,089</b>	<b>1,198,820</b>	<b>200,636</b>	<b>998,185</b>

(a) No deduction has been made for depreciation and maintenance.

(b) No allowance has been made for costs of power, power kerosene, petrol and other oils.

## Sheep

### Distribution throughout Australia

With the exception of a short period in the early eighteen-sixties, when the flocks of Victoria outnumbered those of New South Wales, the latter State has occupied the premier position in sheep-raising, although its relative importance has declined somewhat in recent years, due, among other factors, to heavy losses caused by drought conditions in 1965-66. Concurrently, there has been a marked increase in the sheep population of Western Australia, where figures have doubled in little more than a decade to give that State second position of importance in terms of sheep numbers.

A map showing the distribution of sheep in Australia at 31 March 1963 appears on page 1049 of Year Book No. 50. Graphs showing the number of sheep in Australia from 1870 onwards appear on plates 45 and 46 of this Year Book (pages 795 and 804).

**SHEEP: NUMBERS IN STATES AND TERRITORIES, 1967 TO 1971**  
('000)

<i>Year ended 31 March</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1967 . . . . .	63,848	31,239	19,305	17,864	27,370	4,321	8	281	164,237
1968 . . . . .	67,786	27,909	19,948	16,405	30,161	4,428	9	267	166,912
1969 . . . . .	68,153	30,185	20,324	18,392	32,901	4,395	10	246	174,605
1970 . . . . .	72,284	33,157	16,446	19,747	33,634	4,560	8	244	180,080
1971 . . . . .	70,605	33,761	14,774	19,166	34,709	4,517	9	251	177,792

The percentage distribution of sheep and lambs in the several States in 1971 was: New South Wales, 40; Victoria, 19; Queensland, 8; South Australia, 11; Western Australia, 20; and Tasmania, 3.

# LIVESTOCK: AUSTRALIA, 1880 TO 1971

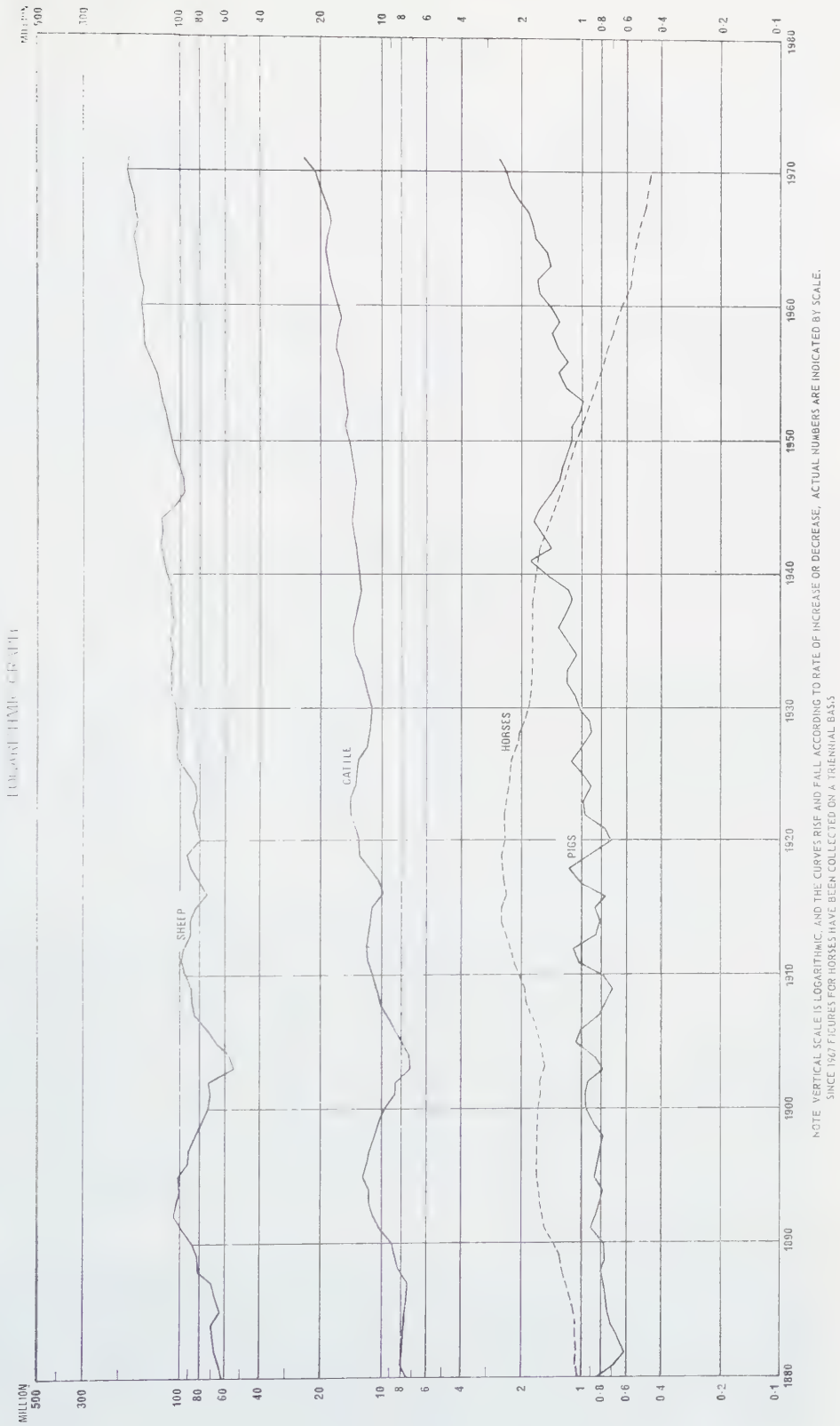


PLATE 45

## Movement in Sheep numbers

**SHEEP AND LAMBS: ANALYSIS OF MOVEMENT IN NUMBERS, AUSTRALIA  
1966-67 TO 1970-71  
(<sup>'000</sup>)**

<i>Year ended 31 March</i>	<i>Numbers at beginning of season</i>	<i>Lambs marked</i>	<i>Net exports</i>	<i>Sheep and lambs slaughtered (a)</i>	<i>Estimated deaths on farms (b)</i>	<i>Numbers at close of season</i>
1967 . . . .	157,563	47,830	337	33,350	7,469	164,237
1968 . . . .	164,237	50,648	362	38,145	9,466	166,912
1969 . . . .	166,912	51,171	361	35,676	7,441	174,605
1970 . . . .	174,605	56,784	487	41,045	9,777	180,080
1971 . . . .	180,080	54,512	768	44,175	11,857	177,792

(a) Includes an estimate for numbers boiled down.

(b) Balance figure; excludes lambs which died before marking.

Comparisons of Australian flock numbers with those of certain other principal sheep-producing countries are given on page 809.

## Classification of sheep according to age, sex, and breed

**SHEEP, BY AGE AND SEX: AUSTRALIA, 31 MARCH 1967 TO 1971  
(<sup>'000</sup>)**

<i>Description</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>	<i>1971</i>
Rams, 1 year and over . . . .	2,013	2,079	2,184	2,200	2,177
Breeding ewes (including ewes intended for mating) . . . .	76,618	77,872	83,607	85,474	84,381
Other ewes, 1 year and over . . .	7,117	6,700	6,424	6,483	7,521
Wethers, 1 year and over . . . .	44,186	42,512	45,178	45,441	45,269
Lambs and hoggets, under 1 year .	34,302	37,750	37,212	40,482	38,443
<b>Total, sheep and lambs . . . .</b>	<b>164,237</b>	<b>166,912</b>	<b>174,605</b>	<b>180,080</b>	<b>177,792</b>

Particulars of the principal breeds of sheep at 31 March 1971 (details are collected on a triennial basis) are shown in the following table.

**SHEEP, BY PRINCIPAL BREED: STATES AND TERRITORIES, 31 MARCH 1971  
(<sup>'000</sup>)**

<i>Breed</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Merino . . . .	53,017	16,740	14,449	16,304	32,100	402	9	198	133,218
Other recognised breeds . . . .	5,196	6,679	137	1,244	1,267	2,904	..	11	17,438
Merino comeback(a) . . . .	1,663	2,199	25	215	363	533	..	8	5,005
Crossbreds(b) . . . .	10,729	8,144	163	1,403	979	678	..	35	22,131
<b>Total . . . .</b>	<b>70,605</b>	<b>33,761</b>	<b>14,774</b>	<b>19,166</b>	<b>34,709</b>	<b>4,517</b>	<b>9</b>	<b>251</b>	<b>177,792</b>

(a) Merino comeback is the progeny of a crossbred Merino ewe and a Merino ram, i.e. finer than half-bred. (b) Half bred and coarser.

## Exports and imports of sheep

The movement of sheep to and from Australia is governed under Customs regulations. Exports of both breeding and slaughter sheep are subject to the provision of a permit from the Department of Primary Industry. For most breeds, these permits are freely granted. However, the export of breeding merinos has been banned since 1929. There was a partial relaxation of this ban for the period February 1970—February 1971, whereby up to 300 merino rams could be purchased, for export, at nominated public auction sales. This partial relaxation was extended, on the same terms, for a further twelve months to 31 January 1972, and again for a period of three years to 31 January 1975. The export of merino ewes, semen and fertilised ova is still prohibited.

Since June, 1958, there has been a prohibition on the import of sheep to protect the Australian sheep industry from the introduction of exotic diseases, such as 'blue-tongue'.



## Cattle

## Objects of cattle-raising in Australia

Cattle-raising is carried out in all States, the main object in certain districts being the production of stock suitable for slaughtering purposes and in others the raising of profitable dairy herds. While dairy cattle are restricted mainly to coastal districts, beef cattle are more widely distributed, and are raised in areas unsuitable for dairy cattle, such as the tropical area of northern Queensland, the Northern Territory and the Kimberley district in the north of Western Australia. Increasing numbers of beef cattle are being raised in conjunction with sheep.

## Distribution throughout Australia

Although cattle numbers declined after 1957 because of drought conditions and heavy slaughtering, they began to rise again in 1960 and in 1964 reached 19,055,000. Again because of drought in the eastern States, this figure declined to 17,936,000 in 1966. There has been a steady increase in the total number of cattle in Australia over the last five years due largely to an increase in the demand for beef. Total cattle numbers in March 1971 were 24.4 million compared with 19.1 million in 1964. Total dairy cattle numbers are currently 4.0 million.

For graph showing the number of cattle in Australia from 1870 onwards *see* plate 45 page 795.

CATTLE: NUMBERS IN STATES AND TERRITORIES, 1967 TO 1971  
(<sup>'000</sup>)

Year ended 31 March	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1967	4,146	3,528	6,919	687	1,357	522	1,097	14	18,270
1968	4,555	3,474	7,361	695	1,427	564	1,130	13	19,218
1969	4,864	3,878	7,668	865	1,546	586	1,190	14	20,611
1970	5,637	4,462	7,515	1,026	1,681	646	1,179	15	22,162
1971	6,494	5,061	7,944	1,196	1,781	733	1,145	18	24,373

The percentage of cattle in each State and Territory during 1971 was: New South Wales, 27; Victoria, 21; Queensland, 32; South Australia, 5; Western Australia, 7; Tasmania, 3; and Northern Territory, 5.

Maps showing the distribution of beef and dairy cattle in Australia appear on page 1050 and facing page 1082 of Year Book No. 50, and maps showing the distribution in earlier years were published in previous issues of the Year Book.

## Classification of cattle

CATTLE, BY PURPOSE, AGE AND SEX: STATES AND TERRITORIES, 31 MARCH 1971  
(<sup>'000</sup>)

Classification	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust
Bulls (1 year and over) used or intended for service—									
Dairy breeds	12	32	11	5	3	3	..	..	65
Beef breeds	103	68	150	20	32	9	32	..	414
Total bulls	115	100	160	25	35	12	32	..	479
Cattle used or intended for production of—									
Milk or cream for sale—									
Cows (in milk and dry)	527	1,244	441	138	96	153	..	1	2,601
Heifers—Springing (within 3 months of calving)									
Other (1 year and over)	124	336	102	19	39	39	..	..	687
Calves (under 1 year)	103	326	80	35	33	40	..	..	614
Milk or cream for use on rural holdings—									
House cows and heifers	74	24	30	6	6	4	..	..	145
Total cattle, production of milk, etc.	827	1,930	653	226	175	234	..	2	4,047
Cattle for other purposes(a)—									
Cows and heifers (1 year and over)	2,956	1,517	3,639	525	825	224	675	9	10,370
Calves (under 1 year)(b)	1,838	1,034	1,723	299	386	192	192	5	5,669
Other (1 year and over), i.e. steers, bullocks, speyed cows, etc.	757	481	1,769	122	360	71	247	1	3,808
Total cattle, other purposes	5,551	3,031	7,131	946	1,572	487	1,113	16	19,847
Total cattle and calves for all purposes	6,494	5,061	7,944	1,196	1,781	733	1,145	18	24,373

(a) Mainly for meat production. (b) Includes vealers, and bull calves intended for service.

**CATTLE, BY PURPOSE, AGE AND SEX: AUSTRALIA, 31 MARCH 1967 TO 1971**  
(<sup>'000</sup>)

<i>Classification</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>	<i>1971</i>
Bulls (1 year and over) used or intended for service—					
Dairy breeds . . . . .	87	82	77	69	65
Beef breeds . . . . .	279	299	323	363	414
<i>Total bulls</i> . . . . .	<i>367</i>	<i>381</i>	<i>400</i>	<i>432</i>	<i>479</i>
Cattle used or intended for production of—					
Milk or cream for sale—					
Cows (in milk and dry) . . . . .	2,881	2,794	2,700	2,673	2,601
Heifers—Springing (within 3 months of calving) and other (1 year and over) . . . . .	796	755	769	703	687
Calves (under 1 year) . . . . .	672	689	624	631	614
Milk or cream for use on rural holdings—					
House cows and heifers . . . . .	180	169	165	156	145
<i>Total cattle, production of milk, etc.</i> . . . .	<i>4,528</i>	<i>4,407</i>	<i>4,258</i>	<i>4,164</i>	<i>4,047</i>
Cattle for other purposes(a)—					
Cows and heifers (1 year and over) . . . . .	6,886	7,450	8,333	9,249	10,370
Calves (under 1 year) (b) . . . . .	3,392	3,868	4,218	4,805	5,669
Other (1 year and over), i.e. steers, bullocks, speyed cows, etc. . . . .	3,097	3,113	3,403	3,512	3,808
<i>Total cattle, other purposes</i> . . . . .	<i>13,375</i>	<i>14,431</i>	<i>15,954</i>	<i>17,566</i>	<i>19,847</i>
<i>Total cattle and calves for all purposes</i> . . . .	<i>18,270</i>	<i>19,218</i>	<i>20,611</i>	<i>22,162</i>	<i>24,373</i>

(a) Mainly for meat production. (b) Includes vealers, and bull calves intended for service.

#### Exports and imports of cattle

In 1970–71 the number of cattle exported was 1,672, valued at \$288,000 (1969–70, 1,647 valued at \$392,000). Prior to June 1958 small numbers of cattle were imported, consisting mainly of valuable animals for stud purposes. Since that date an embargo has been imposed on the import of cattle in order to prevent the introduction of the disease 'blue-tongue'.

#### Comparison with other countries

The following table shows the number of cattle in Australia and in some of the principal cattle-raising countries of the world at the latest available date.

#### CATTLE: NUMBERS IN VARIOUS COUNTRIES

*Source (for countries other than Australia): World Agricultural Production and Trade, United States Department of Agriculture*  
(<sup>'000</sup>)

<i>Country</i>	<i>Year and month</i>	<i>Number p</i>
India(a) . . . . .	1962 (May) . . . . .	236,000
United States of America . . . . .	1971 (January) . . . . .	114,568
U.S.S.R. . . . .	1971 (January) . . . . .	99,100
Brazil . . . . .	1971 (December) . . . . .	97,122
China, Republic of (mainland)(a) . . . . .	1960 (December) . . . . .	65,400
Argentina . . . . .	1971 (June) . . . . .	49,633
Pakistan(a) . . . . .	1961 (Estimate) . . . . .	30,300
Mexico . . . . .	1971 (December) . . . . .	25,374
<b>Australia</b> . . . . .	<b>1971 (March)</b> . . . . .	<b>24,373</b>
Ethiopia . . . . .	1963 (Estimate) . . . . .	22,000
France . . . . .	1971 (October) . . . . .	21,621
Colombia . . . . .	1971 (October) . . . . .	21,173
Turkey(a) . . . . .	1971 (December) . . . . .	14,600
Germany, Federal Republic of . . . . .	1971 (December) . . . . .	13,995
South Africa, Republic of . . . . .	1971 (June) . . . . .	12,557
United Kingdom . . . . .	1971 (December) . . . . .	12,469

(a) Includes buffaloes.

### Horses

The number of horses in Australia reached a peak of 2,527,000 in 1919. Since then it has declined, because of mechanisation of transport and farming, and the number recorded at 31 March 1970 was 456,000. In future, particulars of horses, on a Commonwealth basis, will be collected only at decennial intervals in accordance with the world census by FAO.

A graph showing the number of horses in Australia since 1870 appears on plate 45, page 795.

**HORSES: NUMBERS IN STATES AND TERRITORIES, 1966 TO 1970**  
(‘000)

31 March—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1966 . .	151	n.a.	190	n.a.	35	n.a.	37	1	n.a.
1967 . .	146	55	182	16	35	7	38	1	479
1968 . .	n.a.	n.a.	181	n.a.	n.a.	n.a.	38	1	n.a.
1969 . .	132	n.a.	176	n.a.	n.a.	n.a.	39	1	n.a.
1970 . .	136	53	173	16	29	6	41	1	456

#### Overseas trade in horses

Exports of Australian-bred horses in 1970–71 numbered 1,367, valued at \$3,530,000, made up of horses for breeding (339 valued at \$676,000), horses for racing (953 valued at \$2,800,000, shipped principally to New Zealand, Singapore, the United States of America and Indonesia), and horses for other purposes (75 valued at \$54,000). Horses imported into Australia in 1970–71 (1,161 valued at \$4,598,000) were mainly from New Zealand and the United Kingdom.

### Pastoral products: wool

With about one-sixth of the world's woolled sheep, Australia produces almost one-third of the world's wool and more than half the world's fine-quality Merino wool. The bulk of the production is exported, mainly as greasy wool, although substantial amounts of scoured and carbonised wool, wool on sheep skins and small quantities of semi-manufactured wool are also shipped. The important position held by Australia among the principal sheep and wool producing countries of the world is shown in the table on page 809.

#### Wool marketing

Details of past wool marketing schemes and agreements, including the 1914–18 War Imperial Purchase Scheme, the British Australian Wool Realization Association Ltd, the 1939–45 War Acquisition Scheme, Joint Organization, and the Reserve Price Plans of 1951 and 1965, are given in previous issues of the Year Book.

Approximately 90 per cent of the Australian wool clip is disposed of at auction. (During both world wars, however, auction selling was suspended and replaced by bulk purchase schemes.) There are fourteen recognised wool-selling centres, namely Sydney, Goulburn, Newcastle, Albury, Melbourne, Geelong, Ballarat, Portland, Brisbane, Adelaide, Fremantle, Albany, Hobart, and Launceston. At these centres wool-selling brokers operate large stores where wool received from growers is held awaiting sale.

Each year a wool-selling programme is drawn up by the Joint Wool Selling Organisation representing wool growers, selling brokers and wool-buyers on the basis of the expected clip. Selling dates and the quantities to be offered are then determined for each centre. Before each sale the selling brokers, who act as agents for the wool-growers, display a representative portion of the wool to be sold on show floors for buyers' inspection and valuation. Auction sales are attended by buyers purchasing on behalf of wool users in more than fifty countries.

#### Wool marketing Committee of Enquiry

In 1961 the Commonwealth Government appointed an independent committee to inquire into the marketing and promotion of Australian wool and related matters (see Year Book No. 48, page 977, for further details). The Committee presented its report to the Government in 1962. Its most important recommendation was that wool promotion, research and testing should be brought under the control of a single body, which should also act as an advisory authority on wool marketing. This recommendation was implemented under the *Wool Industry Act* 1962–1970 which set up the Australian Wool Board.



### The Australian Wool Industry Conference

This body was formed by woolgrowers in October 1962 to meet the need for an organisation with sufficient authority to speak on behalf of the woolgrowing industry as a whole. It is not a statutory body and consists of twenty-five members each from the Australian Woolgrowers' and Graziers' Council and the Australian Wool and Meat Producers' Federation. The fifty member conference is presided over by an independent chairman.

The Conference makes recommendations to the Commonwealth Government on policy matters concerning the wool industry. Under the Wool Industry Act it is the responsibility of the Conference to nominate woolgrower representatives for appointment to the Australian Wool Board. Under the Wool Tax Acts (see page 571) the Conference is also responsible for recommending to the Commonwealth Government what rates of levy should be paid by woolgrowers to finance the activities of the Wool Board and the wool research programme.

### Australian Wool Board

This Board constituted under the *Wool Industry Act* 1962-1970, consists of a chairman, six woolgrower representatives, three members with special qualifications, and a representative of the Commonwealth Government. The first chairman of the Board was appointed by the Minister for Primary Industry after consultation with the Australian Wool Industry Conference, but subsequent chairmen will be appointed by the Minister for Primary Industry after consultation with the Board. The six woolgrower representatives are appointed by the Minister on the nomination of the Wool Industry Conference, and the three members with special qualifications are appointed by the Minister after consultation with the Conference.

When the Board came into being on 1 May 1963 it took over the functions of the Australian Wool Bureau. On 1 July 1963 the Australian Wool Testing Authority became part of the Board, and on 1 January 1964 the Board took over the functions of the Wool Research Committee. Information on these three former instrumentalities appears in Year Book No. 48, pages 977-81.

Following the organisational changes carried out under the *Wool Industry Act* 1970, the functions of the Board embrace the following activities.

*Wool promotion in Australia and overseas by publicity and other means.* Promotion overseas is carried out through the International Wool Secretariat, which is maintained jointly by the Wool Boards of Australia, New Zealand, South Africa and Uruguay.

*Provision of testing service for wool and wool products.* This service is administered by a subsidiary board retaining the name Australian Wool Testing Authority.

*Wool Research.* The Board is required to advise the Minister for Primary Industry on the general scope of those research programmes of the C.S.I.R.O. and the Bureau of Agricultural Economics in relation to the needs of the wool industry. The Board is also responsible for recommending grants from the Wool Levy Fund to recipients other than the C.S.I.R.O. and the Bureau of Agricultural Economics.

*Investigation into all aspects of wool marketing on a continuing basis.* The Board is required to inquire into, and from time to time report to the Australian Wool Industry Conference upon, methods of marketing wool and related matters. However, the Board has no executive powers over marketing.

*Maintenance and administration of the wool stores which were entrusted to the Board by the Commonwealth Government.* Further details concerning these stores appear in Year Book No. 48, page 978.

*The establishment of integrated wool selling complexes.* The aim is to make the cost savings inherent in this wool handling technique available to the woolgrowing industry as soon as possible.

At present the main sources of finance for the various activities of the Board are a levy paid by woolgrowers and contributions by the Commonwealth Government, see below.

### Wool levy

Since 1936 a statutory levy has been collected from woolgrowers to finance wool promotion activities. The initial rate of 5c a bale was increased at the request of woolgrowers to 20c a bale in 1945 and 40c a bale in 1952, the latter rate continuing until 1960. Further details regarding the operation of this levy prior to 1957 appear in Year Book No. 48, page 978.

Under legislation passed in 1957 provision was also made for the payment by woolgrowers of a contribution for wool research which was fixed at 20c a bale. In 1960 the wool promotion levy was raised to 50c a bale, and the following year it was increased further to \$1 a bale. The operation of this rate was subsequently extended for 1962-63 and 1963-64.



On 1 July 1964 the basis for collecting the woolgrowers' combined levy for wool promotion and research was changed from a flat rate per bale to a percentage deduction from the gross value of shorn wool sold. A maximum rate of 2 per cent was fixed, but provision was made for a lower rate to be prescribed, if appropriate. For 1964-65 the rate was set at 1.875 per cent, which involved a substantial increase in payments by woolgrowers for promotion (from \$1 per bale to the equivalent of about \$2.70 per bale), while the research component of the levy was left unaltered at 20c per bale. In 1965-66 the levy was set at 2 per cent and it remained at the maximum rate till 1969-70. From 1 August 1970, the rate of levy was reduced to 1 per cent.

The imposition and collection of the combined levy from woolgrowers is governed by six complementary Acts, the Wool Tax Acts (Nos 1 to 5) 1964 and the *Wool Tax Administration Act* 1964-1966.

#### **Commonwealth Government's contributions to wool research and promotion**

In 1945 the Commonwealth Government commenced contributing on a statutory basis to wool research. Initially the contribution was at the rate of 20c a bale, but this was doubled in 1957 to 40c a bale. At this rate the Commonwealth Government contributed about \$2 million to wool research in 1965-66, and a similar sum was provided in 1966-67.

Prior to 1964-65 the Commonwealth Government had not contributed to wool promotion. However, following representations made by the Australian Wool Industry Conference, the Commonwealth Government undertook to provide assistance to the Australian Wool Board in financing its commitment to the greatly expanded wool promotion programme of the International Wool Secretariat. The expanded wool promotion programme, announced by the Secretariat, envisaged an increase in the Wool Board's annual contribution to overseas wool promotion campaigns from the then level of \$5 million to about \$20 million.

From 1 July 1964 the Commonwealth Government undertook to match on a \$1 for \$1 basis any increase in contributions by woolgrowers for wool promotion in excess of the levy of \$1 a bale then in force, and the Wool Industry Conference agreed to increase the growers' levy to the equivalent of about \$2.70 a bale, which resulted in a Commonwealth commitment of about \$1.70 a bale. In aggregate this commitment entailed a Commonwealth contribution for promotion of about \$8 million a year. This arrangement operated until 30 June 1967.

During 1967 the Wool Industry Act was amended following negotiations between the Executive of the Australian Wool Industry Conference and the Government. The amendment provided for a Government contribution for wool research and promotion during the three years 1967-68 to 1969-70 on a \$1 for \$1 basis matching woolgrowers' contribution by levy, to a maximum of \$14 million in any one year. It provided for the grower levy and the Government grant to be apportioned annually between wool research and promotion by the Minister for Primary Industry after considering the recommendations of the Australian Wool Industry Conference. No change occurred in the legislation providing for the payment by woolgrowers of a levy at a rate not exceeding two per cent per annum.

When arrangements for Government financial support for wool research and promotion expired on 30 June 1970, the Government increased its contributions for these activities to an average of \$27 million a year for each of the three years 1970-71 to 1972-73. At the same time, as mentioned above, the levy on woolgrowers was reduced from 2 per cent to 1 per cent of the gross proceeds from the sale of shorn wool.

#### **Australian Wool Marketing Corporation Pty Ltd.**

On 31 October 1967 the Australian Wool Board presented to the Australian Wool Industry Conference a report containing proposals for the establishment of an authority to enforce standards of clip preparation, administer the elimination of one, two, and three bale lots, conduct a price averaging plan for these wools and others voluntarily submitted, and conduct, in conjunction with wool selling brokers, a system of supply management involving chiefly wools in the price averaging plan. The report also recommended the establishment of an organisation of woolgrowers, brokers, and buyers to conduct and control the sale of wool at auction.

A recommendation that these proposals, with some amendments, be implemented by a non-statutory Australian Wool Marketing Corporation was accepted by the Australian Wool Industry Conference in November 1968. The proposals were then submitted to the Government with a request for assistance in financing some of their elements. In September 1969 the Minister for Primary Industry announced details of assistance offered by the Government in response to this request. The Government undertook to meet, for a period of three years, half of the costs involved in handling one, two and three bale lots admitted to the price averaging plan and half of wool selling brokers' administrative charges relating to the price averaging plan, on the understanding that the Government would share equally in any reductions in these charges.

The Government also undertook to meet any losses, incurred by the Wool Marketing Corporation, on wool it may have purchased at the end of a price averaging period and sold in a subsequent

period. The Government's offer was conditional upon the Corporation undertaking to limit its activities to one, two and three bale lots and on the understanding that the total borrowings of the Corporation for the purchase and carry over of price averaging plan wool will not exceed \$14 million at any one time.

The Government's offer was accepted by the Wool Industry Conference at its meeting in November 1969. Arrangements were immediately commenced by the Wool Board to bring the Wool Marketing Corporation into being. The Price Averaging Plan Wool Marketing Scheme, administered by the Corporation, came into operation on 1 July 1970. Included in the Corporation's responsibilities were the operation of the Wool Statistical Service and the Wool Classer Registration Scheme, both formerly administered by the Wool Board. The Wool Statistical Service (described in more detail in Year Book No. 48, pages 997-8) provides comprehensive statistics on the Australian wool clip, while the registration of wool classers is designed to improve the standards of wool classing in Australia.

On the establishment of the Australian Wool Commission (*see below*) in November 1970, the work of the Wool Marketing Corporation was taken over by the Commission. The Corporation was formally wound up in 1971.

### **The Australian Wool Commission**

The Australian Wool Commission was established in November 1970 under the Australian *Wool Commission Act* 1970 to operate a flexible reserve price scheme for wool sold at auction and to perform a number of other functions aimed at improving the marketing of Australian wool.

The Commission consists of seven members comprising a Chairman, two members to represent Australian woolgrowers, a Commonwealth Government representative, and three other members. The three other members are persons with special qualifications in the fields of marketing of wool or wool products; in the processing of wool or the manufacture of wool products; or in commerce, finance or economics. All members, including the Chairman, are appointed by the Minister for Primary Industry. The Chairman is to be a full-time member, appointed for a period of five years. Pending the appointment of a full-time Chairman, a part-time Interim Chairman was appointed in November 1970. All other members of the Commission serve on a part-time basis and are appointed for a period of three years. The Chairman is appointed by the Minister after consultation with the Australian Wool Board. The two woolgrower representatives are appointed after consultation with the Australian Wool Industry Conference. The three members with special qualifications are appointed after consultation with the Wool Board. The Act provides that the Chairman of the Commission should automatically become a member of the Wool Board, to ensure close liaison between the Board and the Commission.

Apart from operating a flexible reserve price scheme for wool, the Commission was empowered to take over the functions of the Australian Wool Marketing Corporation Pty Ltd (*see above*), which include the formulation of standards of clip preparation for wool sold at auction or otherwise and the making of arrangements to secure their observance; the elimination of small lots (except specialty wools) from sale at auction to the extent desirable; the operation of a Price Averaging Plan for wool from small lots; the payment of advances to growers whose wool is included in the Price Averaging Plan; the operation of the Wool Statistical Service; and the operation of a scheme for the voluntary registration of woolclassers.

The Commission also has the following additional functions and powers.

To operate, when judged appropriate by the Commission, a voluntary pool for wool other than that in small lots (i.e. for wool in lots exceeding three bales) and pay advances to owners of such wool.

To formulate the terms and conditions governing the sale of wool at auction and make arrangements for their adoption.

To make arrangements concerning wool auction sale rosters and offerings and to pay advances to growers the sale of whose wool has been delayed because of the arrangements made by the Commission.

To have power to sell wool outside the auction system or have wool processed before sale in cases where such wool cannot be sold advantageously at auction.

To encourage the progressive adoption of proven and practical technological aids to more efficient wool marketing.

To keep under review the operations of firms outside the auction system which purchase wool direct from growers and sell it to local and overseas users, and obtain from these firms such information as the Minister for Primary Industry approves for this purpose.

To make recommendations to the Government for suitable action to be taken if and when it can be clearly demonstrated that private buying and selling is having detrimental effects on wool marketing generally.

With the approval of the Minister for Primary Industry, to participate in negotiations concerning charges associated with the marketing of wool, including freight rates.

To co-operate with authorities and organisations in other countries in measures aimed at more efficient marketing of wool.

To co-operate with the Australian Wool Board and other authorities and organisations in regard to wool promotion and research, including inquiries into methods of marketing wool.

The working capital needed by the Commission (to purchase wool under its flexible reserve price scheme, to make advances to woolgrowers, etc.) is provided in the form of loans by the Commonwealth Government and by trading banks. The Commonwealth guarantees loans made by trading banks to the Commission.

Under the Act, the operating costs of the Commission are to be met jointly by woolgrowers and the Commonwealth Government. The Government provides half of the funds required for the re-handling and brokers' administration charges for the elimination of small lots under the Price Averaging Plan, and is to meet any losses that may result from time to time on the resale of wool purchased by the Commission. The balance of the operating costs of the Commission has to be met by woolgrowers.

#### Emergency financial assistance for woolgrowers

In the 1970-71 Budget an amount of up to \$30 million was provided for emergency assistance to woolgrowers to offset to some extent the decline in wool income resulting from the drastic slump in wool prices between 1968-69 and 1969-70. About \$21.5 million was paid out in grants to over 21,000 woolgrowers during 1970-71 and 1971-72.

#### Wool Deficiency Payments Scheme

This scheme was introduced to give woolgrowers a guaranteed price for the 1971-72 wool selling season for all but specified low price low grade wools comprising the bottom 10 per cent of the clip. A deficiency percentage rate is calculated each week which, when applied to the gross sale price of all wool sold, brings the price up to the equivalent of an average for the whole Australian clip over the full season of 79.37 cents per kilo greasy. Payments to producers of wool are made by the Australian Wool Commission on behalf of the Commonwealth through wool brokers and merchants and other persons registered under the *Wool (Deficiency Payments) Act 1971*.

#### Wool production

Wool as shorn from the sheep contains an appreciable amount of grease, dirt and other extraneous matter, and is termed 'greasy wool'. The quantity of grease and other matter in a fleece differs not only between countries, but between districts in the same country. It fluctuates with the vagaries of the season, and with the breed and the condition of the sheep. To allow for this factor, the weight of greasy wool is sometimes given on a 'clean' basis, i.e. minus the estimated amount of impurities. The net wool fibre content of greasy wool, expressed as a percentage, is termed 'clean yield'.

From 1946-47 to 1952-53 the Australian Wool Realisation Commission, and from 1953-54, the Wool Statistical Service, have assessed annually the clean yield of the Australian wool clip. During the period of assessment the clean yield showed a continuous rise up to 1951-52, when it reached 57.5 per cent. It has since fluctuated between 55.7 per cent and 57.7 per cent. It was 56.8 per cent in 1970-71.

Wool scoured, washed and carbonised in Australia before export, however, has a somewhat lower clean yield than the whole clip, because the grade of greasy wool treated locally for export as scoured, washed or carbonised contains quantities of dirty and low-grade wool. The quantity of scoured wool exported during 1970-71 was about 6.8 per cent of total raw wool exports (excluding wool exported on skins) in terms of greasy. For the clean yield of Australian scoured wools exported a standard factor of 93 per cent has been adopted.

The production of wool in the States and Territories varies broadly in accordance with the number of sheep depastured and with seasonal conditions which affect clip per head (see page 805). In general, however, South Australia obtains from its large-framed merinos a much heavier fleece per sheep than the Australian average. In addition, as a result of better management (improved pastures, fodder conservation, better breeding, control of diseases, etc.), the long-term trend has been towards higher fleece weights.

The following table shows details of total wool (i.e. shorn, dead and fellmongered, and exported on skins) produced by each of the States and Territories during the years 1966-67 to 1970-71. A graph showing the production of wool in relation to sheep numbers from 1870 onwards appears on plate 46 following.



PRODUCTION OF WOOL (GREASY BASIS): STATES AND TERRITORIES, 1966-67 TO 1970-71  
(’000 lb)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1966-67	622,745	378,457	203,664	239,202	272,575	43,153	88	2,454	1,762,338
1967-68	650,420	332,427	226,822	218,951	300,229	38,308	112	2,238	1,769,507
1968-69	673,531	364,347	247,005	238,120	375,650	46,955	111	2,059	1,947,778
1969-70	749,840	427,206	196,353	275,005	336,474	48,195	111	2,555	2,035,738
1970-71	692,943	430,875	168,772	259,121	350,463	47,775	80	2,205	1,952,234

The bulk of the Australian wool production (about 90 per cent in recent years) is shorn from live sheep. The remainder is obtained by fellmongering (less than 1.5 per cent) or is exported on skins (about 8 per cent). The following table shows details of total wool production according to method of obtaining wool, and also the gross value of wool produced. Gross value is based, for shorn wool, upon the average price realised for greasy wool sold at auction and, for skin wools, on prices recorded by fellmongers and skin exporters.

QUANTITY (GREASY BASIS) AND VALUE OF WOOL PRODUCED  
AUSTRALIA, 1966-67 TO 1970-71

Year	Shorn (including crutchings)	Dead and fell- mongered	Exported on skins	Total production	
				Quantity	Value
	’000 lb	’000 lb	’000 lb	’000 lb	\$’000
1966-67	1,602,229	24,841	135,269	1,762,338	812,230
1967-68	1,605,056	23,944	140,507	1,769,507	709,524
1968-69	1,773,222	25,223	149,332	1,947,778	838,651
1969-70	1,849,844	22,172	163,722	2,035,738	735,233
1970-71	1,766,256	17,236	168,741	1,952,234	537,504

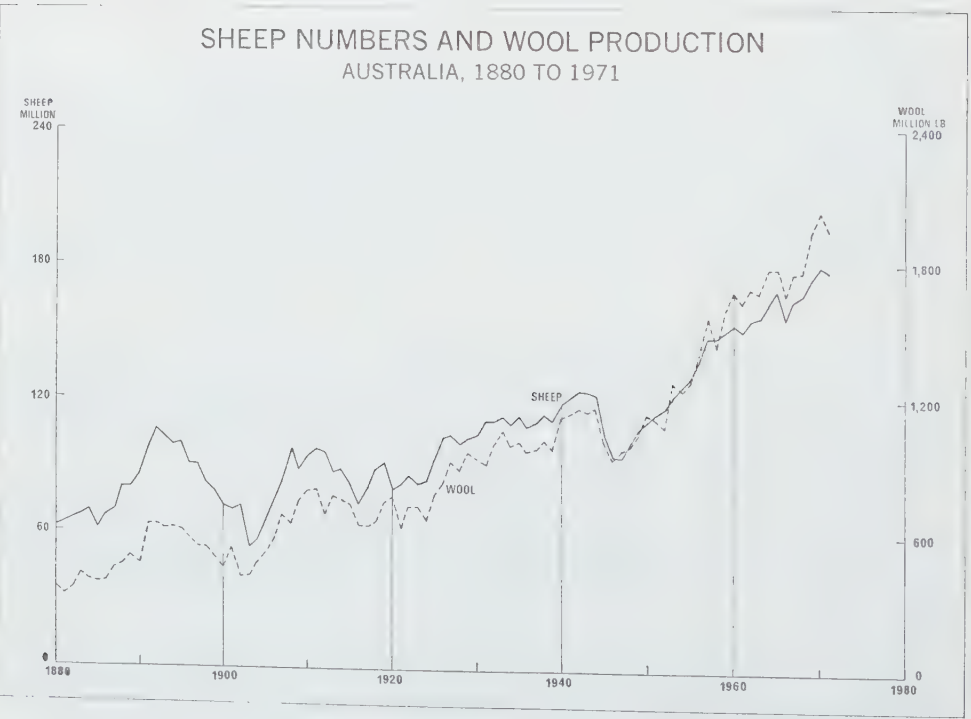


PLATE 46



## Average fleece weight

AVERAGE WEIGHT OF FLEECES SHORN (SHEEP AND LAMBS)  
STATES AND TERRITORIES, 1966-67 TO 1970-71

(lb)

State or Territory	Sheep					Lambs				
	1966-67	1967-68	1968-69	1969-70	1970-71	1966-67	1967-68	1968-69	1969-70	1970-71
N.S.W. . .	10.01	9.87	10.06	10.86	10.04	3.21	3.16	3.56	3.58	3.56
Vic. . .	9.90	9.08	9.79	10.66	10.31	2.90	2.56	2.97	3.03	3.05
Qld . .	9.94	10.62	11.26	10.33	10.34	3.55	4.10	4.34	4.22	4.52
S.A. . .	12.75	12.25	13.41	13.83	12.55	3.90	3.38	3.93	4.12	3.85
W.A. . .	10.67	10.57	11.72	10.36	10.31	2.98	2.97	3.47	2.97	3.05
Tas. . .	10.22	8.62	10.62	10.70	10.30	2.54	2.28	2.66	2.55	2.62
N.T. . .	8.13	10.89	10.78	10.78	9.43	3.00	..	..	..	..
A.C.T. . .	9.81	8.67	8.54	11.29	9.38	1.64	1.65	1.67	1.82	2.11
Aust. . .	10.39	10.14	10.81	10.99	10.46	3.19	3.09	3.52	3.41	3.42

## Classification of wool according to quality

The following table provides a detailed analysis of wool sold at auction, according to quality, for the years 1966-67 to 1970-71. These data are compiled by the Wool Statistical Service on the basis of catalogues of auction sales. 'Quality' ('64's, 60's, 58's,' etc.) is a measure of the fineness and texture of wool for spinning purposes. Broadly, it means the maximum number of hanks of yarn, each of 560 yards length, which can be spun from 1 lb of combed wool. For instance, wool of 64's quality is of a fineness and texture which will produce 64 hanks, each of 560 yards, from 1lb of tops (combed wool) of that particular wool.

CLASSIFICATION OF GREASY WOOL SOLD AT AUCTION(a): AUSTRALIA  
1966-67 TO 1970-71

(Bales of approximately 300 lb)

Predominating quality	1966-67		1967-68		1968-69		1969-70		1970-71	
	Quantity	Per cent	Quantity	Per cent	Quantity	Per cent	Quantity	Per cent	Quantity	Per cent
70's and finer . . .	114,406	2.4	131,939	2.7	113,057	2.2	117,592	2.1	100,212	2.0
64/70's . . .	292,158	6.2	270,039	5.6	203,969	3.9	193,644	3.5	182,516	3.7
64's . . .	470,153	9.9	468,436	9.7	381,785	7.5	349,402	6.3	310,911	6.3
64/60's . . .	403,917	8.5	427,884	8.8	401,844	7.9	441,895	8.0	479,315	9.6
60/64's . . .	1,002,088	21.1	1,089,866	22.4	1,081,779	21.1	1,173,533	21.3	926,234	18.7
60's and 60/58's . .	1,016,979	21.5	1,073,517	22.1	1,228,214	24.0	1,395,028	25.3	1,272,005	25.6
Total, 60's and finer . .	3,299,701	69.6	3,461,681	71.3	3,410,648	66.6	3,671,094	66.5	3,271,193	65.9
58's . . .	660,570	13.9	623,043	12.8	789,540	15.4	786,592	14.3	714,134	14.4
56's . . .	461,182	9.7	433,505	8.9	514,587	10.1	549,550	10.0	469,063	9.4
50's . . .	178,587	3.8	173,313	3.6	204,014	4.0	267,932	4.9	273,498	5.5
Below 50's . . .	61,289	1.3	59,401	1.2	72,710	1.4	97,310	1.8	114,276	2.3
Oddments . . .	81,725	1.7	104,738	2.2	126,142	2.5	136,194	2.5	122,881	2.5
Grand total . .	4,743,054	100.0	4,855,681	100.0	5,117,641	100.0	5,508,672	100.0	4,965,045	100.0

(a) All greasy wool sold at auction except 'wool re-offered account buyer.'

**Price and value**

During 1970-71 the price of greasy and scoured wool sold in the selling centres of Australia averaged 29.34c per lb compared with the average price of 37.55c per lb in 1969-70 and 44.67c per lb in 1968-69. These prices are as compiled by the National Council of Wool Selling Brokers and represent the average price realised for all greasy and scoured wool, of whatever type or quality, marketed during the years indicated.

Fluctuation in Australian wool prices has a marked effect on the nation's rural and national income. In 1945-46 the gross value of wool production was \$117,194,000, representing 17.4 per cent of the gross value of production of all rural industries, while in 1950-51, when prices reached a peak, wool was valued at \$1,303,804,000 or 55.6 per cent of the total value of production for all rural industries. The value of wool production fluctuated considerably in subsequent years. In 1970-71 it was \$537,504,000 or 14.9 per cent of the gross value of production of rural industries.

**ESTIMATED GROSS VALUE OF TOTAL WOOL PRODUCTION(a)**  
**STATES AND TERRITORIES, 1966-67 TO 1970-71**  
 (\$'000)

Season	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1966-67	286,293	180,946	93,190	104,588	124,821	20,983	39	1,370	812,230
1967-68	265,527	133,213	94,874	79,925	119,146	15,609	41	1,189	709,524
1968-69	296,005	155,547	108,060	95,054	161,589	21,180	38	1,178	838,651
1969-70	275,385	154,693	69,783	91,224	124,829	18,081	30	1,208	735,233
1970-71	198,688	118,123	44,916	65,525	94,510	14,983	17	742	537,504

(a) Includes shorn, dead and fellmongered wool and wool exported on skins.

**Stocks of wool**

Stocks of raw wool held in Australia at 30 June 1971 amounted to 489.6 million lb (greasy basis) of which 74.6 million lb (44.7 million lb as greasy and 29.9 million lb as scoured and carbonised) was held by woollen mills, wool scourers and fellmongers, and 415.0 million lb, assumed to be all greasy, was held by brokers and dealers. Of the wool held by brokers and dealers 96.0 million lb was unsold wool and 319.0 million lb was sold wool held awaiting shipment. These stocks exclude wool on skins, since this wool is not recorded as production until fellmongered in Australia or exported on skins.

**Consumption of wool**

Statistics of raw wool consumption published in recent years for the purposes of broad international comparisons are based on the quantities of scoured or carbonised wool used on the woollen and worsted systems (mill consumption), plus quantities used in such processes as felting. Consumption estimates compiled on this basis have obvious defects, as they disregard overseas trade in semi-processed wool (e.g. tops and yarns) as well as woollen goods. Estimates of raw wool used on the woollen and worsted systems and by felt manufacturers in Australia are shown in the following table for the years 1966-67 to 1970-71.

**ESTIMATED CONSUMPTION OF RAW WOOL: AUSTRALIA, 1966-67 TO 1970-71**  
 ('000 lb)

Year	Greasy basis			Clean equivalent		
	Used on woollen and worsted systems	Used for felt manufacture (including hats)	Total	Used on woollen and worsted systems	Used for felt manufacture (including hats)	Total
1966-67	121,777	2,210	123,987	71,412	1,050	72,462
1967-68	128,401	2,530	130,931	73,043	1,202	74,245
1968-69	129,450	2,530	131,980	73,639	1,202	74,841
1969-70	131,083	2,530	133,613	74,568	1,202	75,770
1970-71	134,270	2,530	136,800	76,381	1,202	77,583

As considerable quantities of tops, noils and yarn are exported from Australia, the series on raw wool consumption shown on page 806 is over-stated to this extent. The series 'Estimated consumption of processed wool in Australia' provides a more reliable indication of wool consumption in Australia, as allowance has been made for exports of wool in semi-processed form. This series is shown in the following table for the years 1966-67 to 1970-71. Briefly, the series measures consumption of wool in terms of yarn used in Australian mills and other factories to produce woollen cloth and other woollen goods, yarn used for hand knitting purposes, and scoured wool used for felt manufacture. No allowance has been made for overseas trade in woollen piece goods, clothing, etc., because of the obvious difficulties of estimating accurately the wool content of these products.

**ESTIMATED CONSUMPTION OF PROCESSED WOOL: AUSTRALIA**  
1966-67 TO 1970-71  
(<sup>'000</sup> lb)

Year	<i>Greasy basis</i>				<i>Clean equivalent</i>			
	<i>Worsted yarn used (a)(b)</i>	<i>Woollen yarn used (b)</i>	<i>Scoured wool used for felt manufacture (including hats)</i>	<i>Total</i>	<i>Worsted yarn used (a)(b)</i>	<i>Woollen yarn used (b)</i>	<i>Scoured wool used for felt manufacture (including hats)</i>	<i>Total</i>
1966-67 .	41,838	38,628	2,210	82,676	24,129	23,499	1,050	48,678
1967-68 .	40,232	37,197	2,530	79,959	22,411	22,667	1,202	46,280
1968-69 .	38,801	36,543	2,530	77,874	21,600	22,267	1,202	45,069
1969-70 .	40,503	40,047	2,530	83,080	22,581	24,404	1,202	48,187
1970-71p.	43,132	42,236	2,530	87,898	24,045	25,738	1,202	50,985

(a) Includes hand knitting yarns used.  
fibres.

(b) Includes wool content of yarns containing a mixture of wool and other fibres.

### Quantities of wool exported

Of the total shipments of greasy and slipe wool in 1970-71, 39 per cent went to Japan, 10 per cent to France, 7 per cent to Italy, 7 per cent to the Federal Republic of Germany, 7 per cent to Belgium-Luxembourg and 6 per cent to U.S.S.R.

**EXPORTS OF GREASY AND SLIPE WOOL: AUSTRALIA, 1966-67 TO 1970-71**  
(<sup>'000</sup> lb actual weight)

<i>Country of consignment</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
Belgium-Luxembourg . . . . .	98,546	95,934	84,557	85,469	97,322
China, Republic of (Taiwan) . . . . .	6,972	11,950	22,369	27,216	31,363
France . . . . .	106,208	120,641	130,776	133,192	137,441
Germany, Federal Republic of . . . . .	71,170	100,823	96,880	101,603	101,671
India . . . . .	29,583	21,562	34,027	42,223	37,292
Italy . . . . .	151,749	123,116	130,678	135,707	93,588
Japan . . . . .	492,456	498,087	530,453	569,305	561,476
Poland . . . . .	30,651	35,536	34,460	33,825	28,023
United Kingdom . . . . .	145,828	143,593	115,856	138,051	75,337
Yugoslavia . . . . .	23,577	19,764	18,802	26,608	36,718
U.S.S.R. . . . .	29,205	46,147	62,018	67,395	85,529
Other . . . . .	181,956	177,235	210,123	210,792	148,797
<b>Total . . . . .</b>	<b>1,367,901</b>	<b>1,394,388</b>	<b>1,470,999</b>	<b>1,571,386</b>	<b>1,434,557</b>

**EXPORTS OF SCOURED AND WASHED, AND CARBONISED WOOL: AUSTRALIA**  
**1966-67 TO 1970-71**  
('000 lb actual weight)

<i>Country of consignment</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
Canada . . . . .	3,767	5,087	2,203	2,739	2,107
China, Republic of (Taiwan) . . . . .	1,487	990	1,511	3,185	4,810
France . . . . .	2,920	2,443	2,326	1,358	2,340
Germany, Federal Republic of . . . . .	7,100	8,648	6,773	5,396	8,377
Hong Kong . . . . .	2,816	2,689	4,551	4,348	3,966
Iran . . . . .	4,650	4,729	4,111	4,882	4,179
Italy . . . . .	8,048	8,708	7,434	8,333	7,781
Japan . . . . .	4,215	3,952	3,644	3,703	2,135
Korea, Republic of . . . . .	1,025	1,823	2,693	2,374	1,608
United Kingdom . . . . .	16,850	18,931	13,509	13,350	13,456
United States of America . . . . .	16,180	18,377	19,061	14,360	5,621
U.S.S.R. . . . .	2,472	3,675	7,742	15,358	2,305
Other . . . . .	8,340	9,985	9,834	10,944	13,607
<b>Total . . . . .</b>	<b>79,870</b>	<b>90,037</b>	<b>85,392</b>	<b>90,330</b>	<b>72,292</b>

**EXPORTS OF CARDED OR COMBED WOOL, NOILS AND WOOLWASTE: AUSTRALIA**  
**1966-67 TO 1970-71**  
('000 lb actual weight)

	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
Carded or combed—Tops . . . . .	23,975	22,716	24,124	21,914	19,604
Other . . . . .	..	..	6	8	30
Noils . . . . .	4,114	3,886	3,386	2,608	3,014
Waste . . . . .	2,585	2,875	2,261	2,230	3,207

The following table shows the estimated greasy weights of exports of raw and semi-processed wool for the years 1966-1967 to 1970-71. As the figures in the following table are in terms of 'greasy' basis, they differ from those in the preceding tables which represent actual weight shipped.

**EXPORTS OF WOOL—GREASY BASIS: AUSTRALIA**  
**1966-67 TO 1970-71**  
('000 lb)

	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71<sub>p</sub></i>
<b>Raw wool—</b>					
Greasy and slipe . . . . .	1,368,237	1,395,405	1,471,764	1,571,846	1,434,936
Scoured and washed and carbonised	128,614	147,119	139,531	147,601	118,123
Exported on skins . . . . .	135,269	140,507	149,332	163,722	168,741
<b>Total raw wool . . . . .</b>	<b>1,632,120</b>	<b>1,683,031</b>	<b>1,760,627</b>	<b>1,883,169</b>	<b>1,721,800</b>
<b>Semi-processed wool—</b>					
Tops . . . . .	44,687	43,877	46,801	42,513	38,032
Yarn . . . . .	263	240	200	277	536
<b>Total raw and semi-processed wool . . . . .</b>	<b>1,677,070</b>	<b>1,727,148</b>	<b>1,807,628</b>	<b>1,925,959</b>	<b>1,760,368</b>



**Value of wool exported**

The value of wool (other than wool on sheepskins) exported from Australia during 1970-71 was 13 per cent of the total value of exports of merchandise of Australian origin, while the proportion for the five years ended 1970-71 averaged 21 per cent. The value for the five years ended 1970-71, together with the principal countries to which wool was exported, is shown in the following table.

**VALUE OF WOOL EXPORTS: AUSTRALIA(a), 1966-67 TO 1970-71**  
((\$'000))

<i>Country of consignment</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
Belgium-Luxembourg . . . . .	39,822	32,712	32,709	28,026	24,486
France . . . . .	53,554	49,430	59,991	53,615	42,155
Germany, Federal Republic of . . . . .	40,552	46,517	48,994	48,202	39,246
Italy . . . . .	82,229	60,182	70,127	63,928	33,863
Japan . . . . .	274,321	245,882	263,320	259,766	198,276
United Kingdom . . . . .	85,214	71,846	63,947	62,784	30,062
United States of America . . . . .	50,611	47,058	49,753	36,386	14,672
U.S.S.R. . . . .	20,305	27,368	40,104	43,212	35,349
Other . . . . .	159,843	134,736	166,562	165,124	125,718
<b>Total . . . . .</b>	<b>806,451</b>	<b>715,731</b>	<b>795,507</b>	<b>761,043</b>	<b>543,827</b>

(a) Excludes wool exported on sheepskins.

**World sheep numbers and wool production**

The following table shows particulars of the woolled sheep numbers and total production of wool, in terms of greasy, in the principal wool-producing countries of the world, together with estimates of world production of merino, crossbred, and carpet type wool for the latest available years.

In 1970-71 Australia produced 32 per cent of the world total of all types of wool. Other principal wool producers were New Zealand with 12 per cent of the world total, Argentina, 7 per cent, South Africa, 4 per cent, and United States of America, 3 per cent. Production in the U.S.S.R., China, and eastern European countries together amounted to 21 per cent.

Australia's wool clip is predominantly merino. New Zealand and Argentina produce mainly crossbred wool, while the clip of the U.S.S.R. is largely of the carpet type.

**ESTIMATED WORLD WOOLLED SHEEP NUMBERS AND PRODUCTION OF WOOL**  
**1968-69 TO 1970-71**

(Source for countries other than Australia: Reports published by the Commonwealth Secretariat, London)

<i>Country</i>	<i>Sheep numbers (million)</i>			<i>Wool production (million lb—greasy basis)</i>		
	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71(a)</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71(a)</i>
<b>Australia . . . . .</b>	<b>175</b>	<b>180</b>	<b>178</b>	<b>1,948</b>	<b>2,036</b>	<b>1,952</b>
New Zealand . . . . .	60	60	59	732	723	736
Argentina . . . . .	45	44	43	461	444	427
South Africa . . . . .	34	33	30	314	319	257
United States of America . . . . .	21	20	20	213	195	187
Uruguay . . . . .	22	20	16	181	176	164
United Kingdom . . . . .	27	26	26	119	106	104
U.S.S.R., China, Eastern Europe(b) . . . . .	247	236	243	1,289	1,236	1,288
Other . . . . .	327	328	327	924	910	907
<b>World total . . . . .</b>	<b>958</b>	<b>947</b>	<b>942</b>	<b>6,181</b>	<b>6,145</b>	<b>6,022</b>
Type of wool—						
Apparel type—						
Merino . . . . .				2,491	2,526	2,395
Crossbred . . . . .				2,340	2,338	2,326
Carpet type . . . . .				1,282	1,272	1,284

(a) Provisional. (b) This group comprises Albania, Bulgaria, China (mainland) and Dependencies, Czechoslovakia, East Germany, Hungary, Outer Mongolia, Poland, Romania, Tibet, and U.S.S.R.

**Principal importing countries and sources of supply**

The following table, prepared from information published by the Commonwealth Secretariat, furnishes, in respect of the principal importing countries, details of their imports of wool for 1970 together with the chief sources of supply. The quantities imported refer to the actual weight of wool without distinguishing between greasy and scoured, except in the case of the United States of America, where estimated clean content of wool is quoted.

**PRINCIPAL WOOL IMPORTING COUNTRIES AND SOURCES OF SUPPLY, 1970**

(Source: Information published by the Commonwealth Secretariat, London)

(Million lb)

Importing country	Quantity imported from(a)—					Total imports
	Australia	New Zealand	Argentina	South Africa	Other countries	
Japan . . . . .	560	70	22	43	12	707
United Kingdom . . . . .	130	137	27	29	130	453
France . . . . .	189	91	12	43	15	350
Italy . . . . .	132	33	11	20	42	238
Belgium . . . . .	98	57	3	..	52	210
Germany, Federal Republic of . . . . .	99	32	11	37	38	217
United States of America(b) . . . . .	33	58	20	10	32	153

(a) Actual weight of greasy and scoured wool. (b) Imports are in terms of estimated clean content of greasy and scoured wool. Actual weight of total United States of America imports was 201.6 million lb.

As a considerable transit trade exists between European countries, it must not be assumed that the whole of the imports recorded by these countries is retained for their own consumption. The countries chiefly concerned with the transit trade are the United Kingdom and Belgium.

**Pastoral products: meat****Australian Meat Board**

The Australian Meat Board, which was re-constituted under the *Meat Industry Act* 1964–1969, is the body responsible for controlling the external marketing of Australian beef, mutton and lamb. Powers and membership of the Board prior to 1964 are set out on page 801, Year Book No. 40. Following its reconstitution it consisted of five members representing meat producers, two representing meat exporters, one representing the Commonwealth Government, and an independent Chairman. The *Meat Industry Act* was amended in 1969 to provide for the appointment of an additional member to represent meat producers. The Board's primary function is to ensure that Australian meat exports are marketed in a manner which will safeguard the long-term interests of the Australian meat industry.

The Board regulates overseas marketing of Australian meat by means of an export licensing system. It has power of control over the kinds of meat that may be exported by licensed exporters to particular places, or to particular agents and representatives. The Board also has power to undertake measures to promote the sale and consumption of meat both in Australia and overseas, and it may purchase and sell meat in its own right for the purpose of market development. However, the exercise of this power is limited to activities aimed at meeting special marketing problems or circumstances which preclude the effective participation of private traders. The Board may also purchase and sell meat, with the approval of the Minister for Primary Industry, for the purpose of administering any international arrangements to which Australia may be a party.

**Meat research schemes**

In November 1965 the Commonwealth Parliament passed legislation providing for the extension of the cattle and beef research scheme to cover beef, mutton and lamb research. Details of the beef research scheme were set out on page 1050, Year Book No. 51. Under the new legislation the Cattle and Beef Research Committee was re-constituted as the Meat Research Committee, its powers and functions being similar to those of the former Committee extended to include mutton and lamb research. The Meat Research Committee consists of twelve members—seven meat producer representatives, the Chairman of the Australian Meat Board (Chairman), one representative from the universities engaged in meat research, the Commonwealth Scientific and Industrial Research

Organization, the Australian Agricultural Council, and the Department of Primary Industry. The new Committee came into being in March 1966 and the Cattle and Beef Research Committee ceased to exist from that date.

The scheme is financed from the Livestock Slaughter Levy (*see below*). The Commonwealth makes a matching contribution on a \$1 for \$1 basis to meet expenditure on research. The research is conducted by such bodies as the universities, C.S.I.R.O., State Departments of Agriculture and the Bureau of Agricultural Economics.

The Minister for Primary Industry approved a beef research programme of \$2,467,000, and a mutton and lamb research programme of \$1,254,000 for 1971-72.

### **The Livestock Slaughter Levy**

The *Livestock Slaughter Levy Act* 1964-1966 imposed a levy on all cattle (over 200 lb dressed weight), sheep and lambs slaughtered within Australia for human consumption. These levies operated from 1 August 1964 and have replaced the charge imposed on meat exports and also subsumed the cattle levy for beef research purposes imposed in 1960 (*see page 909, Year Book No. 51*). In November 1968 legislation was passed amending the Act to provide for an additional levy to finance service and investigation activities relating to meat processing. The amended legislation (the *Livestock Slaughter Levy Act* 1964-71) now provides three elements in the levy for each class of livestock—an amount to finance meat research; an amount to finance the operations of the Australian Meat Board; and, from 1 January 1969 until 31 December 1974, an amount to finance service and investigation activities relating to meat processing. The first two elements are paid by producers while the third element is paid by meat processors.

Under the Act the total levy may not exceed 75.0c a head for cattle or 7.5c a head for sheep and lambs. The amount levied for research may not exceed 25.0c a head for cattle or 3.3c a head for sheep and lambs while the amount for service and investigation activities relating to meat processing is set for the period of its operation at 1.0c a head for cattle and 0.1c a head for sheep and lambs. The present operative rate for cattle is 46.0c (25.0c for research; 20.0c to the Australian Meat Board; 1.0c for service and investigation) and for sheep and lambs, 3.85c (1.75c for research; 2.00c to the Australian Meat Board; 0.10c for service and investigation).

### **United Kingdom long-term purchase arrangements**

Details of the long-term meat contracts with the United Kingdom from 1939 to 1952 and of the Fifteen Year Meat Agreement (1952-67) are given on page 710, Year Book No. 41 and in earlier issues. In September 1953 the trade in meat between the United Kingdom and Australia reverted to private traders. The main features of the arrangements were given in Year Book No. 47, page 960. Details of minimum prices operating and deficiency payments received in recent years under private trading appear in Year Book No. 48 (page 973) and No. 50 (page 1068).

On 30 September 1967 the Fifteen Year Meat Agreement expired, and no new agreement has been negotiated. Australia retained duty-free entry for meat until 1 July 1971 when a variable levy system for beef and veal imports and duties on mutton and lamb were introduced by the United Kingdom Government.

### **Lamb Guarantee Scheme**

Since the 1962-63 lamb export season the Australian Meat Board has guaranteed exporters a minimum price on all lambs 36 lb and under shipped to the United Kingdom. For the 1966-67 season the prices were set at 16.0c per lb and 14.5c per lb, and for 1967-68 and 1968-69, 17.0c per lb and 15.5c per lb. Prices set for the 1969-70 and 1970-71 seasons were 18.0c per lb and 16.5c per lb. For the 1971-72 season the scheme was extended to cover the period from August 1971 to July 1972. The guaranteed minimum price for August shipments was set at 19.0c per lb, for September to November 18.5c per lb and for December to July 16.5c per lb. The higher guaranteed price for the initial period is aimed at stimulating early shipments of lamb, because normally the most opportune time for selling Australian lamb in the United Kingdom market is early in the export season.

### **United States-Australia Meat Agreement**

In February 1964 the Governments of Australia and the United States concluded an agreement for the regulation of beef, veal and mutton exports from Australia to the United States with the object of promoting the orderly development of the trade in these classes of meat between the two countries. (Details of the Agreement were given on page 820 of Year Book No. 56). In June 1970, the United States advised that it was terminating the Agreement at the end of 1970. Legislation enacted by the United States Congress in 1964, details of which were given in previous issues of the Year Book, provides for restrictions on imports of fresh, chilled and frozen beef, veal, mutton, and goatmeat from all sources if such imports are estimated by the United States, Secretary of Agriculture to exceed a predetermined figure (the trigger point) calculated by a formula in the legislation. Should quotas be necessary the total permissible imports would be set some 10 per cent below the trigger



point. Until 1968 the estimate of imports did not exceed the trigger point and quotas were not necessary. However, late in that year it appeared likely that quotas would be triggered and to avoid this all major suppliers agreed to restrain shipments. The total restraint level was set approximately half way between the quota level and trigger point. A similar situation arose in 1969 and 1970 and restraints again operated. However in June 1970 the estimate of imports exceeded the trigger point and the United States President suspended the operation of quotas and announced new higher restraint levels for all major suppliers. In 1971 an increase of 41.2 per cent (37.7 per cent in 1970) in the base quantity was set providing for allowable imports of approximately 457,400 tons (445,900 tons in 1970) and a trigger point of 503,100 tons (490,500 tons in 1970). However the initial estimate of imports was 517,900 tons. While this was in excess of the trigger point quotas were not imposed as the United States President exercised, as in 1970, his powers under the legislation and announced that the operation of quotas would be suspended as suppliers had agreed to enter into a restraint agreement with the United States to keep the import level to 517,900 tons.

### Cattle slaughtered

#### CATTLE (INCLUDING CALVES) SLAUGHTERED: STATES AND TERRITORIES 1966-67 TO 1970-71 (<sup>'000</sup>)

Year	<i>Slaughtering passed for human consumption</i>									<i>Total slaughterings including boiled down</i>
	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>	
1966-67 . . .	1,455	1,706	1,677	265	301	170	67	10	5,650	5,701
1967-68 . . .	1,447	1,713	1,664	245	333	172	74	10	5,656	5,731
1968-69 . . .	1,417	1,514	1,823	220	366	178	80	10	5,608	5,672
1969-70 . . .	1,545	1,709	1,680	249	402	178	83	15	5,861	5,921
1970-71 . . .	1,573	1,845	1,590	264	348	162	69	19	5,870	5,896

### Production of beef and veal

#### PRODUCTION OF BEEF AND VEAL (CARCASS WEIGHT): STATES AND TERRITORIES 1966-67 TO 1970-71 (Tons)

Year	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1966-67 . . .	209,403	224,983	295,810	38,754	54,811	24,695	14,572	1,711	864,739
1967-68 . . .	220,879	223,307	310,478	33,074	59,249	25,084	15,879	1,692	889,642
1968-69 . . .	217,011	212,859	340,744	35,617	67,751	27,936	16,239	1,891	920,048
1969-70 . . .	273,358	249,574	309,771	40,059	71,902	31,011	16,147	2,636	994,458
1970-71 . . .	277,910	302,663	297,412	42,807	63,318	29,407	14,092	3,129	1,030,738

### Consumption of beef and veal

The highest post-war consumption of beef and veal (including canned beef and veal) was 132.7 lb per head in 1956-57. With the buoyant overseas market for beef and the high prices ruling in Australia during the following four years, consumption per head fell substantially, and in 1960-61 amounted to only 88.3 lb. In 1970-71 consumption per head was 91.3 lb, of which 87.2 lb was carcass meat and 4.1 lb was canned meat (in terms of carcass equivalent).

#### PRODUCTION AND DISPOSAL OF BEEF AND VEAL (CARCASS WEIGHT) AUSTRALIA, 1966-67 TO 1970-71

Year	<i>Net change in stocks</i>	<i>Pro- duction</i>	<i>Exports (a)</i>	<i>For canning</i>	<i>Apparent consumption in Australia</i>	
					<i>Total</i>	<i>Per head per year</i>
	<sup>'000 tons</sup>	<sup>'000 tons</sup>	<sup>'000 tons</sup>	<sup>'000 tons</sup>	<sup>'000 tons</sup>	lb
1966-67 . . .	- 5	865	384	40	445	85.2
1967-68 . . .	- 6	890	381	38	478	89.7
1968-69 . . .	+12	920	380	34	495	91.1
1969-70 . . .	+ 5	994	481	35	473	85.2
1970-71 . . .	+ 1	1,031	491	44	495	87.2

(a) Includes carcass equivalent of boneless beef exported and all fresh and frozen meat shipped as ships' stores.



**Exports of beef and veal**

While beef and veal were previously shipped largely in carcass form, there has been in recent years a substantial increase in the amount of boneless beef exported. From 1958-59 to 1970-71 the quantity of boneless beef shipped exceeded that exported in carcass form. The trade in boneless beef has been developed principally with the United States of America. In 1970-71, the principal markets for Australian beef and veal exports were the United States (467,160,000 lb, valued at \$208,336,000); United Kingdom (68,777,000 lb, valued at \$20,974,000); and the U.S.S.R. (63,399,000 lb, valued at \$17,943,000).

**EXPORTS OF FROZEN AND CHILLED BEEF AND VEAL(a): AUSTRALIA  
1966-67 TO 1970-71**

Year	<i>Exports of frozen and chilled beef</i>				<i>Exports of frozen veal</i>		<i>Exports of frozen and chilled beef and frozen veal</i>	
	<i>Bone-in</i>		<i>Boneless</i>					
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	'000 lb	\$'000 f.o.b.	'000 lb	\$'000 f.o.b.	'000 lb	\$'000 f.o.b.	'000 lb	\$'000 f.o.b.
1966-67.	14,419	3,910	547,911	188,411	15,889	5,922	578,219	198,243
1967-68.	7,950	2,845	546,473	191,679	9,645	4,064	564,068	198,588
1968-69.	7,218	3,045	548,768	204,247	8,389	3,681	564,375	210,973
1969-70.	29,490	9,068	681,602	277,858	11,804	5,200	722,896	292,126
1970-71.	71,302	21,277	663,114	275,806	12,415	5,768	746,831	302,851

(a) Actual weight shipped, not carcass equivalent.

**PRODUCTION OF MEAT: AUSTRALIA  
1921-22 TO 1970-71**

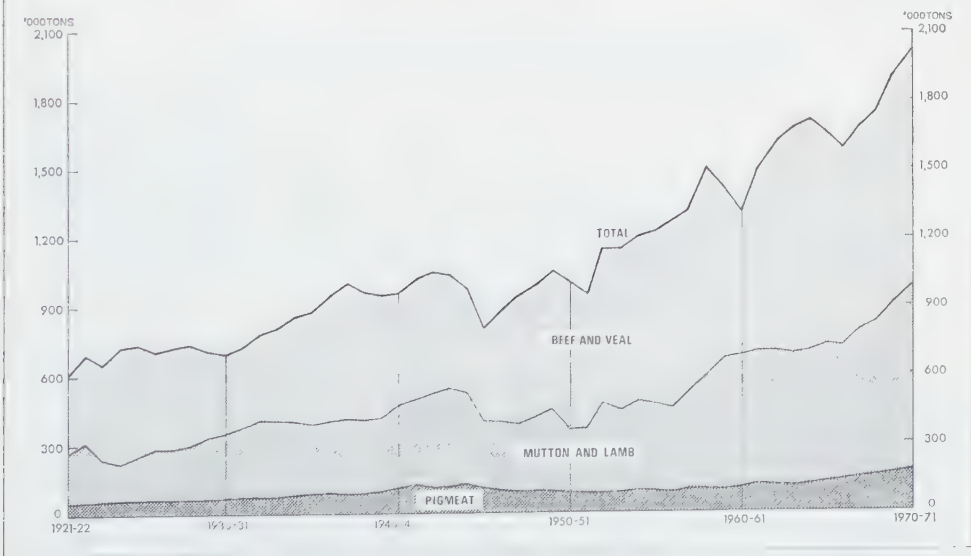


PLATE 47

## Sheep slaughtered

**SHEEP (INCLUDING LAMBS) SLAUGHTERED: STATES AND TERRITORIES  
1966-67 TO 1970-71**  
(<sup>'000</sup>)

Year	Slaughterings passed for human consumption									Total slaugh- terings includ- ing boiled down
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
1966-67	9,989	13,160	2,154	3,358	2,580	1,159	2	93	32,496	32,578
1967-68	12,099	14,999	2,491	4,019	3,173	1,125	..	103	38,008	38,164
1968-69	12,950	12,882	2,724	2,977	3,808	1,241	..	130	36,712	36,803
1969-70	13,309	15,745	2,937	4,232	4,534	1,297	..	158	42,213	42,384
1970-71	14,948	16,434	2,907	5,101	4,416	1,394	2	196	45,397	45,322

## Production of mutton and lamb

**PRODUCTION OF MUTTON AND LAMB (CARCASS WEIGHT): STATES AND TERRITORIES  
1966-67 TO 1970-71**  
(Tons)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1966-67	173,857	243,597	37,744	62,476	46,381	20,902	45	1,621	586,623
1967-68	203,169	261,615	43,801	68,730	55,059	19,845	9	1,795	654,023
1968-69	223,945	247,972	48,208	56,824	67,713	22,452	1	2,240	669,355
1969-70	233,501	277,710	50,711	78,172	76,814	23,669	2	2,482	743,061
1970-71	258,567	307,534	49,390	90,471	77,401	25,661	33	3,163	812,220

## Consumption of mutton and lamb

In 1959-60 consumption of mutton and lamb, at 103 lb per head of population, exceeded that of beef and veal for the first time on record. Subsequently, it showed a continuous decline until 1965-66, when it fell to 82.8 lb per head. The 1970-71 figure was 94.0 lb per head or 6.8 lb per head more than beef and veal.

**PRODUCTION AND DISPOSAL OF MUTTON AND LAMB  
(CARCASS WEIGHT): AUSTRALIA, 1966-67 TO 1970-71**

Year	Net change in stocks ( <sup>'000</sup> tons)	Pro- duction ( <sup>'000</sup> tons)	Exports (a) ( <sup>'000</sup> tons)	For canning ( <sup>'000</sup> tons)	Apparent consumption in Australia	
					Total ( <sup>'000</sup> tons)	Per head per year (lb)
MUTTON						
1966-67	-5	350	132	7	216	41.3
1967-68	+3	412	180	8	222	41.7
1968-69	+2	366	129	7	229	42.1
1969-70	+1	434	218	7	207	37.3
1970-71	+5	463	198	14	246	43.3
LAMB						
1966-67	-3	237	18	..	222	42.5
1967-68	..	242	11	..	230	43.2
1968-69	+1	303	43	..	259	47.7
1969-70	-1	309	57	..	252	45.4
1970-71	+1	349	61	..	288	50.7

(a) Includes carcass equivalent of boneless mutton exported.

## Exports of frozen mutton and lamb

## EXPORTS OF FROZEN MUTTON AND LAMB(a): AUSTRALIA, 1966-67 TO 1970-71

Year	Exports of frozen mutton		Exports of frozen lamb		Exports of frozen mutton and lamb	
	Quantity	Value	Quantity	Value	Quantity	Value
	'000 lb	\$'000 f.o.b.	'000 lb	\$'000 f.o.b.	'000 lb	\$'000 f.o.b.
1966-67 . . .	177,359	35,339	33,161	7,979	210,520	43,318
1967-68 . . .	232,317	44,141	20,336	5,546	252,653	49,687
1968-69 . . .	167,564	32,213	65,004	13,216	232,568	45,429
1969-70 . . .	300,908	60,912	91,289	20,470	392,197	81,382
1970-71 . . .	288,609	52,132	96,172	21,878	384,781	74,010

(a) Actual weight shipped, not carcass equivalent.

■ In 1970-71 the principal buyers of Australian frozen mutton and lamb were Japan (90,266,000 lb, valued at \$6,168,000); the United Kingdom (78,768,000 lb, valued at \$14,350,000); the U.S.S.R. (67,670,000 lb, valued at \$8,930,000); and the United States of America (51,371,000 lb, valued at \$14,821,000).

## Consumption of meat and meat products

The apparent consumption of meat (including cured and canned meat) and edible offal per head of population in Australia is shown in the table below for the years 1966-67 to 1970-71.

## MEAT (INCLUDING CURED AND CANNED) AND EDIBLE OFFAL AVAILABLE FOR CONSUMPTION: AUSTRALIA, 1966-67 TO 1970-71

(lb per head per year)

Year	Beef and veal(a)	Mutton (a)	Lamb(a)	Pork(a)	Offal	Canned meat(b)	Bacon and ham(c)	Carcass equivalent of meat and meat products (d)	
1966-67 . . .	85.2	41.3	42.5	13.4	11.0	5.2	8.1	210.3	
1967-68 . . .	89.7	41.7	43.2	14.6	11.4	4.8	7.7	217.4	
1968-69 . . .	91.1	42.1	47.7	16.1	11.2	4.9	7.8	225.1	
1969-70 . . .	85.2	37.3	45.4	16.6	11.4	5.1	8.3	213.8	
1970-71 . . .	87.2	43.3	50.7	15.2	11.3	5.4	10.2	228.8	

(a) Carcass weight.

(b) Canned weight.

(c) Cured carcass weight.

(d) Includes offal.

## Other pastoral products

## Tallow

Details of tallow consumption are collected from the principal factories using tallow. Recorded usage of inedible tallow in factories classified to industry sub-classes industrial and heavy chemicals and acids, and soap and candles, for the five years 1963-64 to 1967-68 was as follows: 1963-64, 1,077,000 cwt; 1964-65, 1,157,000 cwt; 1965-66, 1,061,000 cwt; 1966-67, 1,007,000 cwt; 1967-68, 880,000 cwt. Details for 1968-69, 1969-70 and 1970-71 are not yet available. The figures above are, however, deficient to the extent that no allowance has been made for small unrecorded amounts used in other types of establishments. Details of edible tallow usage in factories are not available.

Particulars of exports of edible and inedible tallow of Australian origin are shown in the following table for the five years 1966-67 to 1970-71.

**TALLOW: EXPORTS, AUSTRALIA, 1966-67 TO 1970-71**  
(cwt)

	1966-67	1967-68	1968-69	1969-70	1970-71
Edible . . .	244,582	88,465	201,847	348,005	348,947
Inedible. . .	1,767,130	1,654,071	2,035,529	3,019,497	2,739,091
<b>Total . . .</b>	<b>2,011,712</b>	<b>1,742,536</b>	<b>2,237,376</b>	<b>3,367,502</b>	<b>3,088,038</b>

**Overseas trade in hides and skins**

The value of cattle and horse hides, sheep and other skins, and skin pieces sent overseas during 1970-71 amounted to \$73,536,000, compared with a total of \$89,335,000 in 1969-70 and \$76,855,000 in 1968-69.

Of the total exports of sheepskins with wool during 1970-71, amounting to 256,539,000 lb valued at \$48,957,000, 147,075,000 lb valued at \$29,655,000 (61 per cent of total value) were shipped to France, 40,111,000 lb valued at \$8,418,000 (17 per cent) to Italy, and 11,213,000 lb valued at \$2,641,000 (5 per cent) to the Federal Republic of Germany. In the previous year France received 56 per cent (by value) of all sheepskins with wool exported, Italy 24 per cent and the Federal Republic of Germany 6 per cent. The exports of sheepskins with wool during each of the years 1966-67 to 1970-71 were as follows.

**EXPORTS OF SHEEPSKINS WITH WOOL: AUSTRALIA**  
1966-67 TO 1970-71

	1966-67	1967-68	1968-69	1969-70	1970-71
Number . . . '000	27,578	29,757	30,473	34,109	36,181
Value . . . \$'000	62,074	45,620	55,784	63,200	48,957

In 1970-71 a total of 1,533,000 sheepskins without wool were exported, valued at \$856,000. Of these, sheepskins without wool to the value of \$281,000 (33 per cent) were shipped to the United States of America, \$188,000 (22 per cent) to Italy and \$119,000 (14 per cent) to France.

The export trade in cattle hides and calfskins during 1970-71 was distributed among the main importing countries as follows: Japan, \$6,526,000, the Federal Republic of Germany, \$2,220,000, and Italy, \$2,031,000. The total quantity exported was 158,022,000 lb, valued at \$20,686,000.

The exports of furred skins in 1970-71 were valued at \$2,399,000, of which kangaroo and wallaby skins constituted \$1,847,000 and rabbit and hare skins \$405,000. In 1969-70 they accounted for \$1,568,000 and \$619,000 respectively, out of a total of \$2,459,000. The skins were shipped principally to the United States of America, Italy, the United Kingdom, and the Federal Republic of Germany; the values shipped to each in 1970-71 being \$1,197,000, \$569,000, \$204,000 and \$199,000 respectively.

The quantity of cattle hides, including calfskins, imported into Australia during the year 1970-71 amounted to 770,000 lb, valued at \$122,000. The chief source of supply was New Zealand.

**OTHER RURAL INDUSTRIES: DAIRYING, PIG, POULTRY AND  
BEE FARMING**

**The dairying industry**

Australian dairy cattle have shown steady improvement in quality, as demonstrated by yield, over the years. This is attributable to improved breeding, associated with herd recording, better feeding, resulting from the use of improved pastures and better farming methods, arising from the development of modern farm machinery and the application of the results of research.



The Australian dairying industry is conducted under conditions ranging from tropical to temperate and mediterranean type climates, and in general, is confined to the coastal and near coastal regions where rainfall and topography are favourable. These conditions are found in parts of the eastern, southern and south-western coasts. Inland districts include the lower north-east of Victoria, the south-western slopes of New South Wales, the fertile Darling Downs in Queensland, and the irrigated districts of the Riverina in New South Wales and northern Victoria.

The manufacturing and processing sections of the industry are well advanced technologically and certain techniques and equipment developed in Australia are now being adopted overseas. State Agricultural Departments give advice on approved methods of production and inspect animals, buildings and marketable produce, to ensure that the latest advances in technology are passed on to the farmer and that hygiene standards are maintained at a high level.

#### Marginal Dairy Farms Reconstruction Scheme

The Marginal Dairy Farms Reconstruction Scheme was introduced in July 1970 and is to operate for a period of four years. It provides funds up to a maximum of \$25 million, to State Governments to purchase marginal dairy farms from producers who wish to leave the industry and to enable them to sell the land on favourable terms to neighbouring farmers who want to build up their holdings to an economic size. By the end of March 1972, 876 dairy farms had been offered to the States for acquisition; purchase and subsequent sale of 393 had been arranged; and 284 applications rejected. The cost of purchase to that date amounted to \$10 million. The scheme has had its greatest impact in Queensland where almost 80 per cent of the build-up propositions have been located.

#### Marketing of dairy products

The export trade is regulated by the terms of the Commonwealth *Customs Act* 1901–1971 and the Commonwealth *Commerce (Trade Descriptions) Act* 1905–1966 and regulations thereunder. This legislation requires that the true trade descriptions, etc., be marked on all produce intended for export, while official inspection ensures the maintenance of purity and quality. Upon request of the exporter the goods are given a certificate by the inspector.

Details of the *Dairy Produce Export Control Act* 1924–1966 and of the Australian Dairy Produce Board constituted under it were given in earlier issues of the Year Book (see No. 48, pages 999–1000). The administrative expenses of the Australian Dairy Produce Board and other sundry expenditure were met from the proceeds of a levy imposed by the *Dairy Produce Export Charges Act* 1964 (see Year Book No. 51, page 1070). In 1965 this Act, together with the *Dairy Produce Levy Act* 1958, was replaced by the *Butter Fat Levy Act* 1965–1966 (see page 819).

#### Equalisation schemes

Reference is made to the butter and cheese equalisation schemes in Year Book No. 48, pages 998–9. Particulars of the returns realised on local and overseas sales and of the average equalisation rate for the years ended June 1965 to 1970 are given on page 825 of this issue. Details are also given on page 824 of the wholesale prices of butter and cheese for home consumption as determined by the Commonwealth Dairy Produce Equalisation Committee Ltd.

An equalisation scheme for casein similar to that for butter and cheese has been operated since 1952 by the Commonwealth Dairy Produce Equalisation Committee Ltd. Average realisations per cwt under the scheme were \$23.556 in 1966–67, \$24.606 in 1967–68, \$24.629 in 1968–69, \$24.789 in 1969–70. For 1970–71 the interim rate is \$24.00 and for 1971–72 \$26.00

From 1 July 1970 a skim milk powder equalisation scheme was commenced by the Commonwealth Dairy Produce Equalisation Committee. For 1970–71 the interim rate is \$205 a ton and for 1971–72 \$250 a ton.

Statutory support for the equalisation scheme was provided by legislation passed by Parliament during 1970 and ratified by producers at a referendum held in February 1971. The legislation consists of *The Dairying Industry Equalisation Act* 1970, *The Dairying Industry Levy Act* 1970, and *The Dairying Industry Levy Collection Act* 1970. (See Year Book No. 57, page 818).

The basic element of the legislation is the establishment of a fund by way of a levy on the production of butter, butteroil, cheese, casein and such other dairy produce as may be prescribed to provide the necessary finance for equalisation payments. The legislation has been designed to permit the imposition of the levy on one product or a number of products as circumstances warrant. It will not be implemented unless there is a specific need created such as by the withdrawal of an important manufacturer from the present voluntary equalisation scheme.

### Commonwealth bounties and stabilisation plans

*Butter and cheese.* Under the provisions of the various Dairy Industry Assistance Acts, the first of which was passed in 1942, the Commonwealth Government has provided bounties on milk supplied for the manufacture of butter and cheese. Bounties were paid on a seasonal basis prior to 1 April 1946, but from that date have been on a flat rate basis. Bounties are distributed by the Commonwealth Dairy Produce Equalisation Committee Ltd, through factories, to milk producers by payments on butter and cheese manufactured. Details of the three five-year stabilisation plans which operated up to 30 June 1962, will be found in Year Book No. 49, page 1084. Information regarding the plan which operated during the five years ended 30 June 1967 appears in Year Book No. 52, page 961.

A new five-year stabilisation plan came into operation on 1 July 1967. All the features of the previous plan were retained, including the fixed bounty of \$27 million payable in each year of the plan on butter, cheese and butterfat products containing 40 per cent or more butterfat.

The underwriting of final minimum equalised returns on butter and cheese, each year, was also continued. Returns to producers which had been underwritten at 33c per lb on commercial butter each year since the inception of the underwriting arrangement in 1958 were raised to 34c per lb for the 1967-68 season and maintained at that level for 1968-69 and 1969-70.

However these arrangements were altered for the year 1970-71 as the Government's commitments on underwriting relating to total production were no longer appropriate to the changing market situation. Instead of the underwriting arrangements for butter and cheese the Government decided that a grant of \$15,882,000 would be made to the industry for distribution as bounty on the 1970-71 production of butter and cheese under the Dairying Industry Act additional to the existing bounty of \$27 million. This \$42,882,000 was the amount estimated necessary to maintain producer returns at 34c per lb commercial butter equivalent if production was held at 220,000 tons for butter and 70,000 tons for cheese.

The Government also agreed that a grant of \$3,379,000 be made to the industry as bounty on 1970-71 exports of skim milk powder, casein and other non-fat products.

For 1971-72 the Government has provided \$40 million for payment as bounty on butter and cheese production. This amount included a grant of \$13 million additional to the existing bounty of \$27 million on butter and cheese production and was in lieu of the Government's underwriting commitment under the current stabilisation plan. The grant was designed on the basis of future market prospects to allow returns to producers to be maintained at the 34 cents per lb commercial butter basis level on estimated production of 210,000 tons of butter and 76,000 tons of cheese. The export bounty on other non-fat milk products, which was a specific grant provided for 1970-71, was not renewed for 1971-72.

Amounts realised on exports of butter and cheese were, in 1948-49 and 1949-50, in excess of the f.o.b. equivalent of the then guaranteed return and were credited to the Dairying Industry Stabilisation Fund, which was established in July 1948 for the purpose of stabilising returns from exports. During 1951-52 the Stabilisation Fund met the deficiency in respect of all exports which did not earn sufficient to meet the basic return to the factory. From 1 July 1952 to 30 June 1957 it was available to the industry to be used, in whatever manner it considered desirable, to make good any deficiency in respect of all exports other than the 20 per cent provided for under the Commonwealth Government's Five-year Stabilisation Plan. The Act was amended in 1957 to enable the Board to use the fund for such other purposes as are approved by the Minister for Primary Industry, and this amendment was later extended by the *Dairying Industry Act* 1967 to the present time. The balance of accumulated funds in the Dairying Industry Stabilisation Fund at 30 June 1971 totalled approximately \$6,029,000. The major portion of the fund represents capital and other investments in milk recombining plants now established or under construction by the Board in Bangkok, Cambodia, Djakarta and Manila.

*Processed milk products.* Bounty on milk supplied for the manufacture of processed milk products was also payable from 1942 until 30 June 1948, and again from 1 July 1949 to 30 June 1952. The Commonwealth Government provided, under the *Processed Milk Products Bounty Act* 1968, for the payment of a maximum amount of \$800,000 as a bounty on exports of processed milk products in 1967-68. The bounty is to continue under present legislation until 30 June 1972, the maximum amount available being \$800,000 per annum.

*Whole milk.* In addition to the bounties referred to above, the Commonwealth Government subsidised the production of whole milk consumed directly from 1943-44 to 1948-49. Details of the amounts distributed during each year will be found in Year Book No. 38, page 1031.

**Extension, research and promotion of the dairying industry**

*Dairy Industry Extension Grant.* An annual grant of \$500,000, to be expended by State Governments for the purpose of promoting improved farming practices in the dairying industry, was first made by the Commonwealth Government for the five years from 1 July 1948. The grant was renewed at the same level until 30 June 1963 when it was increased to \$700,000 per annum. On 1 July 1966 the Dairy Industry Extension Grant was incorporated in the Commonwealth Extension Services Grant, and assistance to the State agricultural departments for extension services to the dairying industry will be maintained from funds from this source.

*Dairy industry research and sales promotion.* At the request of the Australian Dairy Industry Council, legislation was enacted in 1958 to provide for a sales promotion campaign for butter and cheese in Australia and also for research into industry problems. The legislation provided for a statutory levy on the manufacture of butter and cheese (the Dairy Produce Levy) which was initially set at rates of 0.104c per lb for butter and 0.052c per lb for cheese, the proceeds being divided equally between research and sales promotion. The rates of levy operative from November 1959 were 0.156c per lb for butter and 0.078c per lb for cheese, of which two-thirds was allocated to sales promotion and one-third to research.

In August 1964 the legislation was amended to include butter powder, at the same rates as for butter, and butteroil and ghee at 0.065c per lb for research and 0.130c per lb for sales promotion. In 1965 the Dairy Produce Levy Act was repealed and replaced by the *Butter Fat Levy Act 1965-1966* which provides for the amalgamation of the three levies into one levy on butterfat used in the manufacture of butter, cheese and related products. The maximum rate of levy in the Act is 60 cents per cwt of butterfat, and the prescribed rate operative from 1 October 1971 is 58 cents per cwt (24 cents for promotion, 24 cents for administration and overseas market development, and 10 cents for research).

In February 1972, the Commonwealth Government agreed to industry proposals to broaden the scope of the research levy so that it would apply to all producers. Thus dairy farmers supplying milk for human consumption and for condensery products would be levied.

To implement the new scheme, five new Acts were passed by the Government: *Dairying Research Act 1972*; *Dairying Research Levy Act 1972*; *Dairying Research Levy Collection Act 1972*; *Dairy Produce Sales Promotion Act 1972*; *Butter Fat Levy Act 1972*.

The levies are payable either on a butterfat or gallonage basis, according to the normal method of payment to the producer by the dairy factory or authority. The maximum rate of levy is 12 cents per cwt butterfat or 0.04 cents per gallon of milk. The operative rates of levy are prescribed by Regulations.

The sums raised for research purposes from these levies will increase by approximately \$150,000 per year, which with matching contributions from the Commonwealth Government will make over \$1 million per annum available for dairying research.

The Commonwealth Government agreed to contribute one half of the costs incurred on approved projects included in the programme of research, with a maximum contribution of \$1 for \$1 against funds raised by way of levy and allocated to research. The sales promotion programme is financed solely by the levy. The following table lists the amounts of levies collected for research and sales promotion during the five years 1966-67 to 1970-71.

**BUTTERFAT LEVY: AMOUNTS COLLECTED FOR RESEARCH AND SALES PROMOTION, 1966-67 TO 1970-71**

	(\$)				
	1966-67	1967-68	1968-69	1969-70	1970-71
Research(a) . . .	406,100	363,700	367,720	413,277	387,088
Sales promotion . . .	891,400	804,300	811,860	908,521	923,494
<b>Total collected(a) .</b>	<b>1,297,500</b>	<b>1,168,000</b>	<b>1,179,580</b>	<b>1,321,798</b>	<b>1,310,582</b>

(a) Excludes amounts contributed by the Commonwealth Government.

The scheme is administered by the Australian Dairy Produce Board, which, in respect of research, is advised by a statutory committee, the Dairy Produce Research Committee.



## Cattle for milk production

## DAIRY BREED BULLS, AND COWS AND HEIFERS USED OR INTENDED FOR PRODUCTION OF MILK OR CREAM, 31 MARCH 1967 TO 1971

At 31 March	Cows and heifers used or indented for production of milk or cream for sale				
	Bulls dairy Breed(a)	Cows (in milk and dry)	Heifers		House cows and heifers(c)
			One year and over(b)	Under one year	
1971—					
New South Wales . . . . .	12,031	526,591	123,767	103,135	73,896
Victoria . . . . .	31,756	1,244,089	336,425	325,810	23,547
Queensland . . . . .	10,613	441,103	102,200	79,945	29,795
South Australia . . . . .	5,036	138,271	46,445	34,649	6,231
Western Australia . . . . .	2,627	96,438	38,841	32,956	6,499
Tasmania . . . . .	2,812	153,402	39,205	37,184	4,171
Northern Territory . . . . .	16	162	58	30	123
Australian Capital Territory . . . . .	28	1,082	161	276	305
Australia . . . . .	64,919	2,601,138	687,104	613,985	144,567
1970 . . . . .	69,297	2,673,358	702,982	631,383	156,305
1969 . . . . .	76,651	2,700,635	768,781	624,290	164,548
1968 . . . . .	81,512	2,793,650	754,587	689,038	169,384
1967 . . . . .	87,235	2,880,681	795,771	671,957	179,675

(a) Used or intended for service; excludes bull calves (under 1 year). (b) Springing (within 3 months of calving) and other. (c) Kept primarily for rural holdings' own milk supply.

A map showing the distribution of dairy cattle in Australia at 31 March 1963 appears facing page 1082, Year Book No. 50.

## Milking machines

MILKING MACHINES ON RURAL HOLDINGS: NUMBER OF UNITS(a)  
STATES AND TERRITORIES, 1966 TO 1970

At 31 March	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1966 . . . . .	41,796	105,003	42,199	18,833	9,780	15,894	26	94	233,625
1967 . . . . .	41,433	108,664	40,878	18,143	9,664	16,414	35	94	235,325
1968 . . . . .	40,862	109,137	38,208	18,399	9,317	16,968	40	91	233,022
1969 . . . . .	39,557	112,618	35,401	17,908	9,036	17,057	24	97	231,698
1970 . . . . .	38,013	112,160	34,185	17,642	9,144	16,941	30	75	228,190

(a) The number of units indicates the number of cows that can be milked simultaneously, i.e. the cow capacity of installed milking machines.

## Production of milk

The quantity of milk produced by a dairy cow can be as high as 1,000 gallons a year, and varies greatly with breed, locality and season. For all dairy cows and for all seasons for Australia prior to 1916 production averaged considerably less than 300 gallons per annum. Largely owing to an improvement in the quality of the cattle and the increased application of scientific methods the 300 gallon average has been exceeded in each year since 1924. In the last five years an average of 540 gallons per cow per annum has been obtained. In 1970-71 the average yield was 574 gallons. The annual average yields per cow shown in the following table are obtained by dividing the total production of whole milk for the year ended June by the mean of the number of cows in milk and dry and house cows at 31 March of that year and of the preceding year. They are, in effect, based on the approximate number of cows which were in milk during any part of the year. The average shown is, therefore, less than that for cows which were yielding during the greater part of the year, but it may be accepted as sufficiently reliable to show the general trend.



**AVERAGE MILK PRODUCTION PER COW: STATES AND AUSTRALIAN CAPITAL TERRITORY  
1966-67 TO 1970-71  
(Gallons)**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1966-67	423	647	366	624	480	591	548	521
1967-68	416	596	354	590	502	581	465	497
1968-69	393	663	306	708	546	647	486	525
1969-70	463	712	374	724	543	650	598	584
1970-71	442	708	348	707	520	618	569	574

In the following table particulars of the production of whole milk in the various States and Territories are shown for the years 1966-67 to 1970-71. Victoria is the principal milk-producing State, and in 1970-71 the output from that State, 899 million gallons, represented 56 per cent of total production. Output from New South Wales in 1970-71 was 276 million gallons (17 per cent of the total) and that of Queensland 168 million gallons (10 per cent). Production in the remaining States and Territories accounted for 17 per cent.

**TOTAL PRODUCTION OF WHOLE MILK: STATES AND TERRITORIES  
1966-67 TO 1970-71  
(<sup>'000</sup> gallons)**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1966-67	322,995	796,673	238,134	98,727	55,611	91,418	97	1,070	1,604,725
1967-68	310,056	734,203	217,202	88,822	55,411	90,793	97	900	1,497,484
1968-69	278,930	815,791	171,686	102,808	58,222	102,164	97	898	1,530,597
1969-70	310,876	892,378	191,401	106,236	55,873	103,213	97	939	1,661,013
1970-71	276,167	898,970	167,627	103,592	54,869	98,085	70	773	1,600,153

**UTILISATION OF WHOLE MILK: STATES AND TERRITORIES, 1970-71  
(<sup>'000</sup> gallons)**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Milk used for—									
Butter	101,053	619,433	82,522	28,488	23,745	69,097	..	..	924,338
Cheese	14,435	74,104	16,769	41,893	3,526	12,239	..	..	162,966
Processed milk products	26,010	91,209	68,336	33,211	1,278	3,869	70	773	128,259
Other purposes	134,669	114,225			26,320	12,880			384,590
Total	276,167	898,970	167,627	103,592	54,869	98,085	70	773	1,600,153

In 1970-71, 57.8 per cent of the total milk supply was used for butter, 10.2 per cent for cheese, 8.0 per cent for processed milk products, and 24.0 per cent for other purposes.

**PRODUCTION AND UTILISATION OF WHOLE MILK: AUSTRALIA  
1966-67 TO 1970-71  
(<sup>'000</sup> gallons)**

<i>Year</i>	<i>Quantity used for—</i>					<i>Other purposes(b)</i>
	<i>Total production</i>	<i>Factory butter</i>	<i>Factory cheese</i>	<i>Processed milk products(a)</i>		
1966-67	1,604,725	1,011,000	146,547	99,502		347,676
1967-68	1,497,484	892,898	149,444	98,555		356,587
1968-69	1,530,597	908,565	158,286	98,945		364,802
1969-70	1,661,013	1,021,105	160,597	103,557		375,755
1970-71	1,600,153	924,338	162,966	128,259		384,590

(a) Quantities of milk used to produce two or more products (for example, initially as full cream milk and subsequently as skim milk) are counted once only. (b) Principally fluid milk for domestic purposes. Includes milk used for farm production of butter and cheese.

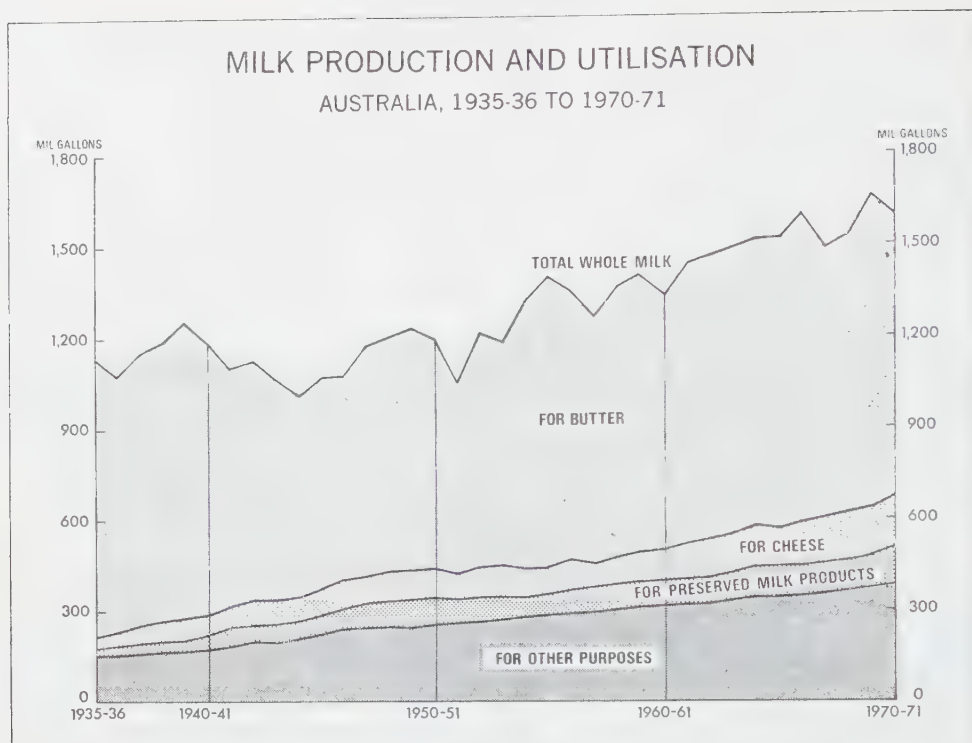


PLATE 48

**Production of butter, cheese and processed milk products**

In 1969-70 factories classified to the industry group Milk Products comprising A.S.I.C. classes 2121 Liquid milk and cream factories, 2122 Butter factories, 2123 Cheese factories, 2124 Ice cream and frozen confections factories and 2125 Milk products n.e.c. factories, numbered 440 and were distributed among the States, as follows: New South Wales, 108; Victoria, 160; Queensland, 63; South Australia, 56; Western Australia, 23; Tasmania, 26; Northern Territory, 2 and Australian Capital Territory, 2.

Factory production of butter in 1970-71 was 448,024,000 lb. This was 46,182,000 lb (9.3 per cent) below the record of 494,206,000 lb attained in 1969-70.

**BUTTER PRODUCTION IN FACTORIES: STATES, 1966-67 TO 1970-71**  
(<sup>000</sup> lb)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1966-67 . .	86,392	266,907	74,375	15,092	14,394	32,056	489,217
1967-68 . .	71,281	241,240	63,546	12,133	13,248	30,865	432,313
1968-69 . .	52,172	280,206	43,083	14,507	13,937	35,315	439,220
1969-70 . .	63,881	313,753	50,258	17,268	13,014	36,033	494,206
1970-71 . .	46,933	299,486	41,387	14,588	11,959	33,671	448,024

Factory production of cheese in 1970-71 reached a record level of 170,952,000 lb, which was 2,746,000 lb (1.6 per cent) more than the previous record of 1969-70.

**CHEESE PRODUCTION IN FACTORIES: STATES, 1966-67 TO 1970-71**  
(<sup>000</sup> lb)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1966-67 . .	12,023	67,907	23,071	38,598	3,807	8,427	153,834
1967-68 . .	12,074	73,570	22,181	32,773	4,373	10,414	155,385
1968-69 . .	12,201	75,256	17,867	42,218	4,458	12,834	164,833
1969-70 . .	18,705	73,866	20,491	39,437	3,787	11,921	168,206
1970-71 . .	16,923	78,935	16,947	41,681	4,226	12,239	170,952

**FACTORY PRODUCTION OF CHEESE BY VARIETIES: AUSTRALIA**  
**1966-67 TO 1970-71**  
('000 lb)

	1966-67	1967-68	1968-69	1969-70	1970-71
Fetta . . . . .	1,042	1,124	1,085	1,223	n.a.
Cheddar . . . . .	137,657	137,616	146,116	149,636	
Cottage . . . . .	1,876	2,215	2,612	3,273	
Edam . . . . .	531	691	8,220	6,123	
Blue Vein . . . . .	187	102			
Grating . . . . .	8,975	9,790	(a)	(a)	
Soft . . . . .					
Gouda . . . . .	(a)	(a)	868	1,039	
Other . . . . .	3,566	3,848	6,070	6,787	
Total cheese . . . . .	153,834	155,385	164,971	168,081	170,952

(a) Not collected separately.

Processed milk products are manufactured mainly in Victoria, which produced 71 per cent of the total (in terms of whole milk equivalent) in 1970-71. New South Wales accounted for 20 per cent and the remaining States for 9 per cent.

**PRODUCTION OF PROCESSED MILK PRODUCTS: AUSTRALIA, 1966-67 TO 1970-71**  
('000 lb)

	1966-67	1967-68	1968-69	1969-70	1970-71
Condensed, concentrated and evaporated milk—					
Full cream—					
Sweetened(a) . . . . .	61,510	47,316	40,439	36,551	36,809
Unsweetened . . . . .	91,700	87,946	98,658	120,893	136,240
Skim . . . . .	24,974	18,932	19,670	40,146	31,633
Ice cream mix (liquid) . . . . .	15,422	9,065	7,238	8,906	9,632
Infants', invalid and health beverages—					
Infants' milk powder . . . . .	14,535	16,233	17,610	21,186	17,485
Other(b) . . . . .	34,813	32,001	36,938	35,273	35,376
Casein . . . . .	45,812	44,815	64,963	71,188	62,788
Powdered milk—					
Full cream—					
Spray . . . . .	46,276	46,125	53,083	49,494	55,335
Roller . . . . .	1,742	1,147	1,341	1,091	1,176
Skim—					
Without added ingredients—					
Spray . . . . .	162,351	161,071	122,104	171,195	164,835
Roller . . . . .	13,153	18,606	14,916	13,791	12,972
With added ingredients—					
Baker's powder . . . . .	5,401	5,937	5,765	8,182	6,666
Other . . . . .	7,679	10,415	13,445	15,725	17,265
Buttermilk or mixed skim and buttermilk—					
Spray . . . . .	12,829	15,836	14,902	21,834	20,318
Roller . . . . .	19,689	17,756	18,957	18,841	17,547
<b>Total powdered milk . . . . .</b>	<b>269,120</b>	<b>276,893</b>	<b>244,513</b>	<b>300,152</b>	<b>296,114</b>

(a) Includes 'coffee and milk'.      (b) Includes malted milk and milk sugar (lactose).

**Wholesale prices of butter and cheddar cheese in Australia**

Details of prices operating in each of the States since 1 July 1958 are shown in the following table. The prices included are those determined by the Commonwealth Dairy Produce Equalisation Committee Ltd for choicest grade bulk butter and cheddar cheese.

**WHOLESALE PRICES OF BUTTER AND CHEDDAR CHEESE: AUSTRALIA**  
(\$ per cwt)

<i>Date from which prices became effective</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>
<b>Butter—</b>						
1 July 1958 . . .	48.53	48.53	48.42	48.42	48.53	48.53
1 July 1960 . . .	50.17	50.17	50.05	50.17	50.17	50.17
19 June 1964 . . .	51.80	51.80	51.80	51.80	51.80	51.80
14 February 1966 . . .	52.08	52.08	52.08	52.08	52.08	52.08
31 March 1969 . . .	54.60	54.60	54.60	54.60	54.60	54.60
3 August 1971 . . .	56.84	56.84	56.84	56.84	56.84	56.84
<b>Cheddar cheese—</b>						
1 July 1958 . . .	29.17	29.17	29.17	29.17	29.17	29.17
1 July 1960 . . .	29.63	29.63	29.63	29.63	29.63	29.63
19 June 1964 . . .	30.57	30.57	30.57	30.57	30.57	30.57
14 February 1966 . . .	30.80	30.80	30.80	30.80	30.80	30.80
7 November 1966 . . .	33.04	33.04	33.04	33.04	33.04	33.04
10 November 1970 . . .	34.16	34.16	34.16	34.16	34.16	34.16
3 August 1971 . . .	35.28	35.28	35.28	35.28	35.28	35.28
8 November 1971 . . .	38.64	38.64	38.64	38.64	38.64	38.64

**Local consumption of butter and cheese**

Following the cessation of butter rationing after the 1939–45 War, consumption per head rose to 31.2 lb in 1951–52. However, in later years it gradually declined, and in 1970–71, at 20.3 lb per head, it reached its lowest level since the war. Consumption of cheese per head rose steadily in recent years and in 1965–66 reached a record level of 7.9 lb. There was a slight decline thereafter, however in 1970–71 it attained a new record figure of 9.0 lb per head.

**PRODUCTION AND DISPOSAL OF BUTTER AND CHEESE**  
**AUSTRALIA, 1966-67 TO 1970-71**

Year	Change in stocks(a) ( <sup>0</sup> 000 lb)	Factory pro- duction ( <sup>0</sup> 000 lb)	Exports(b) ( <sup>0</sup> 000 lb)	Apparent consumption in Australia	
				Total ( <sup>0</sup> 000 lb)	Per head per year (lb)
BUTTER					
1966-67	. . . - 872	489,217	234,611	255,478	21.8
1967-68	. . . - 3,068	432,313	177,331	258,050	21.6
1968-69	. . . +11,471	439,220	170,709	257,040	21.1
1969-70	. . . +12,974	494,206	226,075	255,157	20.5
1970-71	. . . -15,165	448,024	205,187	258,002	20.3
CHEESE					
1966-67	. . . + 5,248	153,834	57,423	91,162	7.8
1967-68	. . . -10,527	155,385	76,249	89,663	7.5
1968-69	. . . +12,375	164,833	56,494	95,968	7.9
1969-70	. . . -22,532	168,206	90,199	100,540	8.1
1970-71	. . . -23,598	170,952	80,571	113,979	9.0

(a) Balance figure (includes imports). (b) Includes ships' stores; figures for butter include ghee and butter concentrate expressed as butter.



**Average returns from butter and cheddar cheese sold**

The table below shows rates realised on local, interstate and overseas sales and the average equalisation and subsidy rates in operation for the years ended June 1967 to 1972.

**BUTTER AND CHEDDAR CHEESE: RATES REALISED ON SALES, AVERAGE  
EQUALISATION RATES AND RATES OF COMMONWEALTH SUBSIDY UNDER  
DAIRYING INDUSTRY ACTS, 1966-67 TO 1971-72**

(Source: Commonwealth Dairy Produce Equalisation Committee Ltd)

(\$ per cwt)

Year	Rates realised on sales				Average equalisa- tion rate	Rate of subsidy	Rate of overall return to manu- facturer
	Intrastate	Interstate	Manu- facturing	Overseas			
Butter—							
1966-67 . . .	49.88	47.46	31.97	29.87	39.38	5.66	45.04
1967-68 . . .	49.22	47.17	31.87	27.60	39.50	6.31	45.81
1968-69 . . .	49.75	47.54	32.02	26.67	38.91	6.02	44.93
1969-70 . . .	(a)	(a)	(a)	(a)	(b)38.00	(b)5.40	(b)43.40
1970-71 . . .	(a)	(a)	(a)	(a)	(b)38.20	(b)9.40	(b)47.60
1971-72 . . .	(a)	(a)	(a)	(a)	(b)41.40	(b)7.72	(b)49.12
Cheddar cheese—							
1966-67 . . .		31.24		21.52	27.01	2.04	29.05
1967-68 . . .		31.53		17.81	25.04	2.38	27.42
1968-69 . . .		31.50		17.73	24.84	2.87	27.71
1969-70 . . .		(a)		(a)	(b)25.50	(b)2.58	(b)28.08
1970-71 . . .		(a)		(a)	(b)25.50	(b)4.24	(b)29.74
1971-72 . . .		(a)		(a)	(b)28.25	(b)3.69	(b)31.94

(a) Not yet available. (b) Interim rates.

The distribution between factory and farm of the overall return to manufacturers for butter is shown in the following table.

**COMMERCIAL BUTTER: AVERAGE OVERALL RETURNS  
AUSTRALIA, 1966-67 TO 1971-72**

(Source: Commonwealth Dairy Produce Equalization Committee Ltd)

(Cents per lb)

<i>Year</i>					<i>Rate of overall return to manufacturer</i>	<i>Estimated manufacturing cost</i>	<i>Return to dairy farmer</i>
1966-67	.	.	.	.	40.216	4.583	35.633
1967-68	.	.	.	.	40.904	4.583	36.321
1968-69	.	.	.	.	40.114	4.750	35.364
1969-70	.	.	.	.	(a)38.911	4.911	34.000
1970-71	.	.	.	.	(a)42.500	5.161	37.339
1971-72	.	.	.	.	(a)43.857	5.161	38.696

(a) Interim rates.

**Overseas trade in dairy products**

The production of butter and cheese in Australia is considerably in excess of local requirements, and consequently a substantial surplus is available for export overseas. In normal circumstances the extent of this surplus is chiefly dependent upon seasonal conditions.

Exports of butter in 1970-71 amounted to 155.4 million lb, compared with 179.8 million lb in 1969-70. Exports of cheese in these years were 80.4 million lb and 90.0 million lb respectively. The principal importing country for Australian butter in 1970-71 was the United Kingdom, accounting for 78.9 per cent of total exports. In 1970-71 Japan replaced the United Kingdom as the principal importing country for Australian cheese with 30.1 per cent of total shipments.

All butter and cheese exported comes under the provisions of the Exports (Dairy Produce) Regulations and is subject to supervision, inspection and examination by officers appointed for that purpose. These commodities are graded according to quality, which has been fixed by regulation

as follows: flavour and aroma, 50 points; texture, 30 points; and condition, 20 points. Butter and cheese graded at 93 to 100 points is of choicest quality; at 90 to 92 points, first quality; butter at 88 to 89, cheese at 86 to 89 points, second quality; and butter at 83 to 85 points, pastry or cooking quality.

In the following table particulars are given of the relative proportions of butter and cheese graded for export according to quality. Further details for 1968-69, which include actual quantities by States, will be found in *Rural Industries*, Bulletin No. 7.

#### BULK BUTTER AND CHEESE GRADED FOR EXPORT: AUSTRALIA, 1968-69 TO 1970-71

Grade	Quantity ('000 lb)			Per cent		
	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
BUTTER(a)						
Choicest quality . . . .	145,577	176,642	129,074	86.1	87.7	87.2
First quality . . . . .	16,923	18,716	14,301	10.0	9.3	9.7
Second and pastry quality(b) . . . .	6,658	6,002	4,557	3.9	3.0	3.1
<b>Total . . . . .</b>	<b>169,158</b>	<b>201,360</b>	<b>147,932</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
CHEESE						
Bulk cheddar—						
Choicest quality . . . .	29,036	22,723	24,131	35.0	28.0	30.8
First quality . . . . .	31,339	34,248	28,285	37.8	42.3	36.2
Second quality(b) . . . .	2,721	4,236	2,227	3.3	5.2	2.8
Other cheese . . . . .	19,839	19,831	23,671	23.9	24.5	30.2
<b>Total . . . . .</b>	<b>82,935</b>	<b>81,038</b>	<b>78,314</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Includes unsalted. (b) Includes rejected.

Exports of butter, cheese and other milk products of Australian origin are shown in the following table.

#### EXPORTS OF DAIRY PRODUCTS: AUSTRALIA, 1968-69 TO 1970-71

	Quantity ('000 lb)			Value (\$'000 f.o.b.)		
	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
Butter(a) . . . . .	140,865	179,827	155,444	34,745	43,750	38,148
Cheese(b)—						
Processed(c) . . . . .	16,922	20,367	18,902	6,070	6,580	6,772
Other—						
Cheddar and epicure cheddar . . . . .	28,821	62,016	51,087	5,417	11,027	9,436
Parmesan (incl. parmigiano and reggiano) . . . .	64	70	154	30	33	82
Other . . . . .	10,289	7,584	10,237	2,355	1,928	2,088
<b>Total cheese . . . . .</b>	<b>56,096</b>	<b>90,037</b>	<b>80,380</b>	<b>13,872</b>	<b>19,570</b>	<b>18,378</b>
Other milk products—						
Preserved, condensed, concentrated, etc.—						
Sweetened . . . . .	12,653	10,606	8,915	1,570	1,385	1,234
Unsweetened . . . . .	10,512	13,130	11,922	1,189	1,504	1,445
Infants' and invalids' food (essentially of milk)(d) . . . .	29,079	29,652	31,646	9,171	8,802	9,196
Casein . . . . .	58,217	66,812	59,301	10,809	12,094	11,562
Dried or powdered—						
Full cream . . . . .	30,006	33,789	37,425	7,435	7,557	8,554
Skim . . . . .	88,259	116,751	109,843	6,127	8,316	9,184

(a) Excludes butter concentrate, ghee and ships' stores. (b) Excludes ships' stores. (c) Includes pastes and spreads. (d) Includes malted milk.

### The pig industry

In line with the general trend of increased specialisation common to most of the rural industries, pig farming has developed into a separate industry being no longer mainly associated with the dairy industry.

In 1971, a research scheme was established for the Australian Pig Industry. It is similar to those already operating for the benefit of other major rural industries such as wool, meat, wheat, dairy, tobacco, poultry and the dried fruit industries. Finance is provided from a levy of 5 cents per head on all pig slaughterings and this is matched, on a dollar for dollar basis from Commonwealth sources. In all, some \$300,000 annually is available for research.

The research programme is administered by a Pig Industry Research Committee. This Committee, which is representative of the industry and research organisations, makes recommendations to the Minister for Primary Industry relating to the rate of levy and expenditure from the Pig Industry Research Trust Fund.

At 31 March 1971 the number of pigs in Australia reached a record level of 2,590,195 which represented an increase of 191,831 (8.0 per cent) on the previous record at 31 March 1970 (2,398,364).

#### PIGS: NUMBERS IN STATES AND TERRITORIES, 1967 TO 1971

<i>At 31 March</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Aust.(a)</i>
1967 . .	513,575	350,591	467,572	222,334	160,983	85,654	2,791	1,803,500
1968 . .	645,196	376,990	520,141	242,319	182,507	86,517	1,999	2,055,669
1969 . .	690,226	421,655	535,496	288,019	219,787	95,363	2,488	2,253,034
1970 . .	707,703	495,128	479,586	350,748	250,051	111,275	3,873	2,398,364
1971 . .	796,184	519,779	491,328	389,417	277,501	112,636	3,229	2,590,195

(a) Incomplete; excludes Australian Capital Territory.

A long-term comparison of pig numbers is given in the division Pastoral Production of this chapter (see page 793). A map showing the distribution of pigs in Australia at 31 March 1963 faces page 1083, Year Book No. 50 and a graph showing the number of pigs in Australia from 1870 onwards appears on plate 45 of this Year Book (see page 795).

#### PIGS SLAUGHTERED: STATES AND TERRITORIES, 1966-67 TO 1970-71

('000)

<i>Year</i>	<i>Slaughterings passed for human consumption</i>									<i>Total slaughterings (including boiled down)</i>
	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>	
1966-67 . .	849	698	666	316	214	149	2	9	2,903	2,912
1967-68 . .	908	700	735	310	242	143	3	9	3,049	3,058
1968-69 . .	1,008	771	800	317	263	139	3	10	3,310	3,319
1969-70 . .	1,065	895	757	386	316	160	3	12	3,593	3,605
1970-71 . .	1,093	941	742	436	316	171	3	16	3,717	3,722

#### Production of pigmeat, bacon and ham

#### PRODUCTION OF PIGMEAT (CARCASS WEIGHT): STATES AND TERRITORIES 1966-67 TO 1970-71

(Tons)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1966-67 . .	38,283	33,094	33,255	15,947	11,584	7,164	87	386	139,800
1967-68 . .	41,129	33,204	36,739	15,787	13,159	6,890	93	385	147,386
1968-69 . .	46,313	36,582	39,168	15,939	14,006	7,024	107	460	159,599
1969-70 . .	49,032	40,355	37,280	19,765	16,718	7,881	87	386	171,504
1970-71 . .	49,438	44,840	36,833	22,181	16,470	8,395	104	522	178,783

**PRODUCTION OF BACON AND HAM (CURED CARCASS WEIGHT): STATES  
1966-67 TO 1970-71**

(Tons)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
1966-67 . .	15,366	9,995	14,670	4,403	4,624	1,242	50,300
1967-68 . .	15,134	9,340	14,103	4,110	5,128	1,281	49,096
1968-69 . .	14,748	9,872	15,189	3,998	5,417	1,394	50,618
1969-70 . .	15,947	11,891	14,068	4,933	5,678	1,381	53,898
1970-71(a)—							
(bone in) .	10,705	4,409	5,527	1,097	4,792	901	27,430
(bone out) .	4,895	8,649	5,531	3,451	1,290	537	24,351

(a) Statistics on a bone in/bone out basis are not available prior to 1970-71.

**Consumption of pigmeat, bacon and ham**

The apparent consumption of pigmeat decreased from 16.7 lb per head in 1969-70 to 15.2 lb in 1970-71.

**PRODUCTION AND DISPOSAL OF PIGMEAT (CARCASS WEIGHT): AUSTRALIA  
1966-67 TO 1970-71**

<i>Year</i>	<i>Change in stocks(a)</i>	<i>Production</i>	<i>Exports</i>	<i>Curing and canning</i>	<i>Apparent consumption (as pork or smallgoods) in Australia</i>	
					<i>Total</i>	<i>Per head per year</i>
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb
1966-67 . . .	-1.1	139.8	0.9	69.8	70.2	13.4
1967-68 . . .	+0.9	147.4	0.6	68.1	77.9	14.6
1968-69 . . .	+0.4	159.6	1.2	70.3	87.7	16.1
1969-70 . . .	-0.2	171.5	5.1	74.1	92.6	16.7
1970-71 . . .	-0.9	178.8	1.7	91.8	86.2	15.2

(a) Includes allowance for imports.

**PRODUCTION AND DISPOSAL OF BACON AND HAM (CURED CARCASS  
WEIGHT): AUSTRALIA, 1966-67 TO 1970-71**

<i>Year</i>	<i>Change in stocks</i>	<i>Pro- duction</i>	<i>Exports</i>	<i>Canning</i>	<i>Apparent consumption in Australia</i>	
					<i>Total</i>	<i>Per head per year</i>
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb
1966-67 . . .	-0.2	50.3	0.2	8.1	42.1	8.1
1967-68 . . .	+0.1	49.1	0.2	7.7	41.1	7.7
1968-69 . . .	..	50.6	0.2	8.1	42.4	7.8
1969-70 . . .	+0.3	53.6	0.2	7.3	45.8	8.3
1970-71 . . .	..	66.2	0.3	8.1	57.8	10.2



## Exports of pigs and pig products

## EXPORTS OF PIGS AND PIG PRODUCTS: AUSTRALIA, 1968-69 TO 1970-71

		Quantity			Value (\$'000 f.o.b.)		
		1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
Bacon and ham (including canned)	'000 lb	498	572	877	377	415	593
Lard	'000 lb	42	35	231	8	6	23
Frozen pork	'000 lb	2,658	11,358	3,808	935	4,050	1,425
Pigs, live	number	1,600	933	1,877	93	47	107

## The poultry industry

Once part of the mixed farming sector, the poultry industry is now a highly specialised and distinct industry. The bulk of production is obtained from this commercial source, though many farm households and some private homes in suburban areas keep poultry to supply their domestic needs and some supplies from this source are also marketed. Because the data from this latter sector is incomplete, details of poultry numbers throughout Australia are not published. There is an increasing tendency for specialisation within the industry into hatcherymen, egg producers and broiler producers. These sectors of the industry each have separate statistics. There are also separate research schemes for the egg and meat chicken industries. Both sectors are good examples of the general movement towards specialised, large scale capital intensive production which is common to all rural industries.

## Stabilisation scheme for the egg industry

A Commonwealth industry stabilisation scheme for the egg industry has been in operation since 1 July 1965. The principal features of the scheme are embodied in three Commonwealth Acts—*Poultry Industry Levy Act 1965-1966*, *Poultry Industry Levy Collection Act 1965-1966*, and *Poultry Industry Assistance Act 1965-1966*.

The scheme provides for the imposition of a levy on hens over six months of age kept for commercial purposes. The money obtained from the levy is used to meet trading losses on surplus eggs. Previously, returns to producers were equalised by State Egg Boards, who imposed an equalisation deduction to cover deficits which resulted from sales to overseas markets.

In determining the rate of the hen levy, the Minister for Primary Industry is required to take into consideration any recommendations by the Council of Egg Marketing Authorities of Australia (which consists of all members of the State Egg Marketing Boards) and is precluded from prescribing a rate in excess of such recommendations. The maximum rate of levy permitted under the legislation is \$1 per hen per annum. The levy is payable fortnightly by the owner of the hen. The levy operated at its maximum in 1969-70 and 1970-71. It was apportioned at a rate of 4 cents per hen per fortnight for the first 24 fortnights and 2 cents per hen per fortnight for the remaining two fortnights, in accordance with the recommendations of the Council of Egg Marketing Authorities of Australia.

Exemptions from payment are granted on the first twenty hens in each flock and also on a substantial proportion of broiler breeder hens. The eggs produced by broiler breeder hens which are not used for hatching determine the proportion of those hens on which the levy becomes payable in accordance with a formula incorporated in the legislation.

By arrangement between the Commonwealth and State Governments, the State Egg Boards collect the levy due in each State from individual producers and remit the total amount to the Commonwealth (the Department of Primary Industry collects the levy in the Australian Capital Territory). The Commonwealth Government pays into the Poultry Industry Trust Fund amounts equal to the receipts obtained from the hen levy. These amounts totalled \$12,755,000 in 1970-71 (\$11,114,000 in 1969-70). Payments from the Fund are made to the State Governments for financial assistance to the poultry industry, and are authorised by the Minister for Primary Industry, after consideration has been given to the recommendations by the Council of Egg Marketing Authorities of Australia. Payments from the Trust Fund totalled \$12,505,000 in 1970-71 (\$11,346,000 in 1969-70).

## Research

The *Poultry Industry Assistance Act 1965-1966* permits expenditure from the Poultry Industry Trust Fund to be made for research. The Commonwealth Government has agreed to match expenditure from this Fund on a \$1 for \$1 basis with a limit to its contribution of \$100,000 per annum. There is no restriction on the amount which may be expended from the Fund for research purposes.

Research projects are recommended by the Council of Egg Marketing Authorities of Australia for approval by the Minister for Primary Industry. Expenditure may be approved for scientific, technical or economic research, the publication of reports thereon, the training of persons for research, and the dissemination of information and advice on scientific, technical or economic matters.

### Chicken Meat Research

In June 1969, a research scheme for the chicken meat industry was established along lines similar to those operating for the wool, wheat, dairy, meat, tobacco and poultry industries. The operative Acts are the *Chicken Meat Research Act*, 1969, the *Meat Chicken Levy Act*, 1969 and the *Meat Chicken Collection Act*, 1969. This legislation provides for a levy of one-tenth of a cent on each meat chicken hatched before 1 July 1972 and, thereafter, for a levy at a prescribed rate not exceeding one-quarter of a cent per meat chicken hatched. Hatcheries, hatching less than 20,000 meat chickens per annum, are exempt from the levy. The legislation also provides that the industry levy be paid into a Trust Account and that research expenditure therefrom be matched on a \$1 for \$1 basis by the Commonwealth. On this basis, it is estimated that funds currently available for research will be approximately \$200,000 per annum.

### Marketing of eggs

Details of the *Egg Export Control Act* 1947-1966 were given in earlier issues of the Year Book (see No. 47, page 997).

### Chicken hatching and poultry slaughterings

Statistics shown in the following section have been compiled on a Commonwealth basis since 1965-66 from returns supplied by commercial chicken hatcheries (i.e. those making sales of day-old chicks) and by commercial poultry slaughtering establishments. Poultry farmers hatching chicks solely for replenishing their own flocks, producers in the Northern Territory and the many very small producers are excluded from the collection. However, the statistics represent a high level of coverage in respect of commercial hatcheries and slaughtering establishments.

### Poultry slaughtered for human consumption

No allowance has been made in the following figures for interstate movement of dressed poultry or changes in stocks held, and figures therefore do not necessarily represent the level of consumption in the States concerned.

Statistics for poultry slaughtered in Queensland are based on numbers slaughtered as collected by the Queensland Department of Primary Industries. From 1968-69, New South Wales slaughtering statistics include poultry slaughterings by producers in the Australian Capital Territory. Prior to that year, Australian Capital Territory slaughtering statistics were not collected.

NUMBERS OF POULTRY SLAUGHTERED FOR HUMAN CONSUMPTION  
1966-67 TO 1970-71  
(‘000)

Year	Chickens(a)	Other fowls(b)	Ducks and drakes	Turkeys
1970-71				
New South Wales . . .	49,192	3,255	708	1,119
Victoria . . .	19,854	1,908	283	146
Queensland . . .	15,689	1,461	78	69
South Australia . . .	7,894	341	50	23
Western Australia . . .	10,175	499	(c)	(c)
Tasmania . . .	1,103	119	(c)	(c)
<b>Australia . . .</b>	<b>103,907</b>	<b>7,581</b>	<b>1,214</b>	<b>1,440</b>
1969-70 . . .	84,644	6,681	968	1,331
1968-69 . . .	75,174	6,025	1,010	916
1967-68 . . .	76,361	5,403	790	660
1966-67 . . .	67,085	4,760	775	694

(a) Comprises broilers, fryers and roasters. (b) Comprises hens, roosters, etc. (c) Not available for publication.

**DRESSED WEIGHT OF POULTRY SLAUGHTERED FOR HUMAN CONSUMPTION<sup>(a)</sup>**  
**1966-67 TO 1970-71**  
('000 lb)

<i>Year</i>	<i>Chickens<sup>(b)</sup></i>	<i>Other fowls<sup>(c)</sup></i>	<i>Ducks and drakes</i>	<i>Turkeys</i>	<i>Total</i>
1970-71—					
New South Wales . . .	138,382	11,557	2,647	10,426	163,013
Victoria . . . . .	55,559	6,820	1,016	1,353	64,747
Queensland <sup>(d)</sup> . . . .	46,571	5,439	282	529	52,821
South Australia . . . .	19,838	1,163	222	229	21,452
Western Australia . . .	25,622	1,930	(e)	(e)	28,492
Tasmania . . . . .	2,936	390	(e)	(e)	3,516
<b>Australia . . . . .</b>	<b>288,909</b>	<b>27,300</b>	<b>4,560</b>	<b>13,272</b>	<b>334,041</b>
1969-70 . . . . .	232,432	23,891	3,605	13,101	273,029
1968-69 . . . . .	206,651	21,875	3,849	8,335	240,709
1967-68 . . . . .	197,350	19,671	3,099	6,363	226,482
1966-67 . . . . .	168,130	16,940	2,997	7,093	195,159

(a) Dressed weight of all birds, including pieces and giblets, as reported in all States except Queensland. (b) Comprises dressed weight of broilers, fryers and roasters. (c) Comprises dressed weight of hens, roosters, etc. (d) Estimated. (e) Not available for publication.

### Chicken hatchings in commercial hatcheries

Details contained in the following tables relate to all eggs set and to chicks hatched in commercial hatcheries whether for sale as day-old chicks or for replenishment of own flocks.

**NUMBER OF EGGS SET<sup>(a)</sup> IN COMMERCIAL HATCHERIES: STATES, 1966-67 TO 1970-71**  
('000)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
<b>MEAT STRAINS</b>							
1966-67 . . . . .	50,141	19,626	n.a.	6,215	(b)	1,227	(c)77,209
1967-68 . . . . .	54,270	20,655	17,969	7,407	(b)	(b)	112,484
1968-69 . . . . .	51,667	20,120	18,381	6,546	(b)	(b)	109,832
1969-70 . . . . .	60,438	21,946	20,233	8,090	(b)	(b)	124,529
1970-71 . . . . .	76,536	29,401	23,127	11,891	(b)	(b)	158,953
<b>EGG STRAINS</b>							
1966-67 . . . . .	19,847	12,206	n.a.	5,352	3,784	761	(c)41,950
1967-68 . . . . .	19,510	12,578	8,823	5,060	3,256	1,024	50,251
1968-69 . . . . .	19,971	13,104	8,909	5,049	3,660	904	51,597
1969-70 . . . . .	22,447	14,440	9,925	5,971	3,665	1,206	57,654
1970-71 . . . . .	19,333	15,343	9,971	5,885	4,444	849	55,827

(a) Includes eggs which failed to hatch. (b) Not available for publication. (c) Incomplete; see individual States.

**CHICKENS HATCHED(a) IN COMMERCIAL HATCHERIES: STATES, 1966-67 TO 1970-71**  
(<sup>'000</sup>)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
<b>INTENDED FOR CHICKEN MEAT—MEAT STRAINS</b> (Unsexed)							
1966-67 . .	34,163	14,486	n.a.	4,383	(b)	833	(c)53,865
1967-68 . .	37,629	15,806	13,456	5,218	(b)	(b)	80,874
1968-69 . .	35,563	15,546	13,765	5,053	(b)	(b)	79,538
1969-70 . .	41,464	17,334	14,882	6,173	(b)	(b)	89,835
1970-71 . .	54,462	22,105	16,548	9,101	(b)	(b)	114,999

<b>INTENDED FOR CHICKEN MEAT—EGG STRAINS</b> (Crossbred and other cockerels)(d)							
1966-67 . .	1,743	1,509	n.a.	230	313	72	(c)3,867
1967-68 . .	1,545	1,567	759	134	105	43	4,153
1968-69 . .	1,191	880	457	180	66	19	2,794
1969-70 . .	1,846	1,462	431	373	58	7	4,177
1970-71 . .	975	1,096	464	300	52	19	2,906

<b>INTENDED FOR EGG PRODUCTION—EGG STRAINS</b> (Pullets)(d)							
1966-67 . .	6,293	4,114	n.a.	1,925	1,253	273	(c)13,858
1967-68 . .	6,093	4,251	2,862	1,904	1,143	371	16,624
1968-69 . .	6,310	4,455	2,922	1,854	1,246	299	17,085
1969-70 . .	7,110	4,977	3,169	2,136	1,314	408	19,115
1970-71 . .	6,325	5,350	3,176	2,125	1,560	268	18,803

(a) Excludes chicks destroyed. (b) Not available for publication. (c) Incomplete; see individual States. (d) Includes (for States other than Queensland) a proportion of unsexed egg strain chicks.

**Recorded production of eggs and egg products**

Available statistics of the production and disposal of eggs in Australia are restricted to those recorded by the Australian Egg Board and the Egg Marketing Board of New South Wales. Details of production as recorded by these authorities are shown in the following table.

**SHELL EGGS: PRODUCTION(a) RECORDED BY EGG BOARDS**  
**STATES, 1966-67 TO 1970-71**  
(<sup>'000</sup> dozen)

<i>State</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
New South Wales(b)	68,043	74,682	76,062	82,021	89,663
Victoria . . . .	34,100	38,231	41,147	47,613	53,339
Queensland . . . .	20,474	21,393	20,854	23,837	25,305
South Australia . . . .	13,176	15,813	15,692	16,655	19,440
Western Australia . . . .	9,810	11,583	11,491	12,716	14,501
Tasmania . . . .	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Total(c)</b> . . . .	<b>145,603</b>	<b>161,702</b>	<b>165,247</b>	<b>182,842</b>	<b>202,249</b>

(a) Receipts from consignors and sales by producer agents. (b) Includes Australian Capital Territory. (c) Excludes Tasmania.

Particulars of the production of whole egg pulp as recorded by the Egg Marketing Board for the State of New South Wales and by the Australian Egg Board for the other States are shown in the following table.



**LIQUID WHOLE EGG PULP: PRODUCTION RECORDED BY EGG BOARDS  
STATES, 1966-67 TO 1970-71**  
(<sup>'000</sup> lb)

<i>State</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
New South Wales . . . . .	15,734	14,532	15,691	22,009	28,488
Victoria . . . . .	6,029	8,841	10,093	13,930	18,373
Queensland . . . . .	6,809	7,877	5,288	7,988	7,582
South Australia . . . . .	4,953	7,024	5,370	6,074	8,137
Western Australia . . . . .	1,143	1,802	1,510	1,964	2,982
Tasmania . . . . .	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Total(a)</b> . . . . .	<b>34,667</b>	<b>40,076</b>	<b>37,952</b>	<b>51,965</b>	<b>65,562</b>

(a) Excludes Tasmania.

In addition to liquid whole egg, production was also recorded of liquid egg whites and liquid egg yolks. Output in 1970-71 amounted to 8,329,000 lb and 5,699,000 lb respectively, compared with 8,071,000 lb and 5,563,000 lb respectively, in the previous year. These figures exclude small quantities produced in Tasmania for which details are not available.

**Consumption of eggs and egg products**

Because of the operation of producers outside the control of the Egg Boards and the extent of 'back-yard' poultry-keeping, for which no statistics are collected, figures relating to total egg production must be accepted with some reserve. The production shown in the following table, together with details of exports and consumption, is based upon the records of Egg Boards of production from areas under their control, plus estimates of production from uncontrolled areas and from 'back-yard' poultry-keepers.

**ESTIMATED PRODUCTION AND DISPOSAL OF EGGS IN SHELL  
AUSTRALIA, 1966-67 TO 1970-71**

<i>Year</i>	<i>Change in stocks</i>	<i>Estimated total production</i>	<i>Exports(a)</i>	<i>For drying and pulping(b)</i>	<i>Apparent consumption in Australia</i>	
					<i>Total</i>	<i>Per head per year</i>
	<i>mil. doz</i>	<i>mil. doz</i>	<i>mil. doz</i>	<i>mil. doz</i>	<i>mil. doz</i>	<i>doz</i>
1966-67 . . . . .	+0.2	237.8	5.3	31.3	201.0	17.2
1967-68 . . . . .	-0.3	253.3	6.5	42.3	204.7	17.2
1968-69 . . . . .	-0.1	257.4	7.6	41.0	208.9	17.2
1969-70 . . . . .	..	272.4	5.1	53.6	213.6	17.2
1970-71 . . . . .	+0.2	288.3	5.1	64.8	218.2	17.2

(a) Includes ships' stores. (b) Includes wastage.

Details of the annual consumption of shell eggs, liquid whole egg and total shell egg equivalent per head of population are shown in the following table.

**SUPPLIES OF EGGS AND EGG PRODUCTS AVAILABLE  
FOR CONSUMPTION: AUSTRALIA, 1966-67 TO 1970-71**  
(Per head per year)

<i>Year</i>	<i>Eggs in shell</i>	<i>Liquid whole egg and egg powder(a)</i>	<i>Total</i>	
			<i>Number</i>	<i>Weight(b)</i>
	<i>number</i>	<i>number</i>		<i>lb</i>
1966-67 . . . . .	206	13	220	27.5
1967-68 . . . . .	206	14	221	27.6
1968-69 . . . . .	206	14	220	27.5
1969-70 . . . . .	206	14	220	27.5
1970-71 . . . . .	206	14	220	27.5

(a) In terms of number of eggs in shell. (b) The average weight of an egg in Australia is taken as 2 oz.

**Overseas trade in poultry products**

Australian exports of shell eggs in 1970-71 amounted to 3,990,000 dozen compared with 3,956,000 dozen in 1969-70. The main outlets for Australian eggs in 1970-71 were Hong Kong (1,414,000 dozen), Kuwait (529,000 dozen), Bahrain (499,000 dozen), and Trucial States (429,000 dozen).

**EXPORTS OF POULTRY PRODUCTS: AUSTRALIA  
1968-69 TO 1970-71**

		Quantity			Value (\$'000 f.o.b.)		
		1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
Eggs in shell . . .	'000 doz	6,043	3,956	3,990	1,356	987	1,038
Eggs not in shell—							
In liquid form . . .	'000 lb	28,505	38,493	43,129	4,214	6,211	7,052
Dry . . . . .	'000 lb	99	125	842	31	94	357
Frozen poultry . . .	'000 lb	2,699	3,682	5,168	858	1,098	1,504
Poultry, live(a) . . .	number	86,574	418,987	369,821	24	125	161

(a) Includes day-old chicks.

Imports of canned poultry in 1970-71 amounted to 470,000 lb, valued at \$116,000, compared with 156,000 lb, valued at \$64,000, in 1969-70.

**The bee-farming industry****Production of honey and bees-wax**

Although practised as a separate industry, bee-farming is also carried on in conjunction with other branches of farming. A feature of the industry is that it consists mainly of itinerant apiarists operating on a large scale with mobile equipment. Some of these apiarists move as far afield as from Victoria to Queensland in an endeavour to provide a continuous supply of nectar from flora suitable for their bees. Production of honey in 1970-71 amounted to 42,165,000 lb (112.3 lb per productive hive) compared with 49,972,000 lb (133.4 lb per productive hive) in 1969-70. Bees-wax produced in 1970-71 was 587,000 lb compared with 676,000 lb in the previous year.

In the following tables, statistics for 1970-71 for each State are confined to apiarists with five or more hives, except in New South Wales where, since 1966-67, details relate to beekeepers with six or more hives. Prior to 1966-67, statistics for States other than Queensland related to beekeepers with five or more hives. In Queensland, details were confined to beekeepers on rural holdings with five or more hives and to beekeepers not on rural holdings with ten or more hives.

**BEEHIVES, HONEY AND BEES-WAX: STATES AND A.C.T., 1970-71**

State or Territory	Beehives(a)			Honey produced		Bees-wax produced	
	Pro- ductive	Unpro- ductive	Total	Quantity	Gross value	Quantity	Gross value
	'000	'000	'000	'000 lb	\$'000	000 lb	\$'000
New South Wales . . .	142	47	189	7,456	1,833	241	140
Victoria . . . . .	82	22	103	9,804	984	120	68
Queensland . . . . .	42	21	64	3,773	394	58	35
South Australia . . .	67	14	81	7,032	705	102	58
Western Australia . .	33	11	44	3,025	266	52	29
Tasmania . . . . .	9	2	12	1,002	173	14	7
Australian Capital Terri- tory . . . . .	1	1	1	74	7	1	..
<b>Australia . . . . .</b>	<b>376</b>	<b>118</b>	<b>493</b>	<b>42,165</b>	<b>4,362</b>	<b>587</b>	<b>337</b>

(a) At 30 June 1971.

The production of honey and bees-wax fluctuates considerably and is determined mainly by the flow of nectar from flora, particularly the eucalypts, which varies greatly from year to year.

**HONEY AND BEES-WAX PRODUCTION: STATES AND A.C.T., 1966-67 TO 1970-71**  
(<sup>'000</sup> lb)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>HONEY</b>								
1966-67 . . .	10,580	7,160	3,461	6,588	6,882	385	100	35,158
1967-68 . . .	21,014	7,580	4,116	6,844	3,410	841	153	43,958
1968-69 . . .	10,654	3,638	1,718	5,770	6,553	671	78	29,081
1969-70 . . .	18,731	8,220	3,144	10,638	7,409	821	109	49,072
1970-71 . . .	17,456	9,804	3,773	7,032	3,025	1,002	74	42,165
<b>BEES-WAX</b>								
1966-67 . . .	137	88	52	93	99	7	1	477
1967-68 . . .	281	92	66	105	49	13	2	609
1968-69 . . .	145	50	32	92	94	11	1	425
1969-70 . . .	254	103	49	157	99	13	1	676
1970-71 . . .	241	120	58	102	52	14	1	587

**Honey levy**

A levy is imposed on domestic sales of honey for the purposes of financing the operations of the Australian Honey Board. The current rate of levy which became effective on 1 November 1971, is, five-tenths of a cent per lb, but under the provisions of the *Honey Levy Act* 1962-65, it can be increased by regulation to a maximum of one cent per lb. The proceeds of this levy may be expended on the regulation of Australian exports of honey and on associated promotional and research activities. In 1968-69, 1969-70 and 1970-71 collections amounted to \$106,000, \$102,000 and \$108,000 respectively.

**Overseas trade in bee products**

The principal importer of Australian honey in 1970-71 was the United Kingdom, accounting for 66.8 per cent, by value, of total exports.

Bees-wax was exported mainly to the United Kingdom and Japan in 1970-71.

**EXPORTS OF HONEY AND BEES-WAX: AUSTRALIA, 1968-69 TO 1970-71**

	<i>Quantity (<sup>'000</sup> lb)</i>			<i>Value (\$<sup>'000</sup> f.o.b.)</i>		
	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
Honey . . . . .	12,246	14,695	22,076	1,480	1,775	3,051
Bees-wax . . . . .	301	250	345	200	166	218

**Value of dairy, poultry and bee-farming production****Value of dairy, poultry and bee-farming production**

Value of dairy, poultry and bee-farming production for 1970-71 and earlier years are shown in the following tables. Further information on values, including definitions of the terms used, is given in Chapter 29 Miscellaneous.

**GROSS VALUE OF DAIRY, POULTRY AND BEE-FARMING PRODUCTION: AUSTRALIA  
1966-67 TO 1970-71**

(\$'000)

	1966-67	1967-68	1968-69	1969-70	1970-71
<b>DAIRYING</b>					
Whole milk used for—					
Butter(a) . . . . .	165,635	134,089	148,148	172,762	156,798
Cheese(a) . . . . .	33,345	31,148	29,994	29,344	30,825
Processed milk products . . . . .	25,355	23,084	23,245	23,075	28,812
Other purposes . . . . .	148,955	154,280	154,547	161,283	170,487
Subsidy paid on whole milk for—					
Butter . . . . .	24,500	24,100	23,313	23,581	37,200
Cheese . . . . .	2,500	2,900	3,687	3,419	5,682
<i>Total, whole milk (including subsidy)</i> . . . . .	<i>400,289</i>	<i>369,602</i>	<i>382,935</i>	<i>413,466</i>	<i>492,805</i>
Pigs slaughtered . . . . .	83,961	89,598	86,842	96,066	104,992
Dairy cattle slaughtered . . . . .	39,563	44,849	43,967	37,703	32,191
<b>Total dairying</b> . . . . .	<b>523,814</b>	<b>504,050</b>	<b>513,742</b>	<b>547,239</b>	<b>566,989</b>
<b>POULTRY</b>					
<b>Total poultry</b> . . . . .	<b>171,551</b>	<b>169,342</b>	<b>176,167</b>	<b>184,401</b>	<b>195,322</b>
<b>BEE-FARMING</b>					
Honey . . . . .	3,765	4,259	2,760	4,427	4,362
Bees-wax . . . . .	224	367	259	397	337
<b>Total bee-farming</b> . . . . .	<b>3,992</b>	<b>4,627</b>	<b>3,021</b>	<b>4,824</b>	<b>4,702</b>

(a) Excludes Commonwealth subsidy which is shown separately.

**GROSS, LOCAL AND NET VALUE OF DAIRY PRODUCTION  
STATES AND TERRITORIES, 1970-71**

(\$'000)

<i>State or Territory</i>	<i>Gross production valued at principal markets</i>	<i>Marketing costs</i>	<i>Local value of production</i>	<i>Value of materials used in process of production</i>	<i>Net value of production (a)</i>
New South Wales . . . . .	151,920	12,716	139,204	(b)24,309	114,895
Victoria . . . . .	243,791	15,806	227,985	25,261	202,724
Queensland . . . . .	70,053	4,957	65,095	10,020	55,075
South Australia . . . . .	43,918	1,019	42,900	11,803	31,097
Western Australia . . . . .	26,861	1,522	25,339	16,865	8,474
Tasmania . . . . .	29,858	1,624	28,234	4,710	23,523
Northern Territory . . . . .	158	n.a.	158	n.a.	158
Australian Capital Territory . . . . .	430	22	408	99	308
<b>Australia</b> . . . . .	<b>566,989</b>	<b>37,666</b>	<b>529,323</b>	<b>93,067</b>	<b>436,254</b>

(a) No deduction has been made for depreciation and maintenance.  
power, power kerosene, petrol and other oils.

(b) No allowance has been made for costs of

**Indexes of quantum and price of dairy, poultry and bee-production**

For details of these indexes see Chapter 29, Miscellaneous.



## CHAPTER 23

# WATER CONSERVATION AND IRRIGATION

## RESOURCES, UTILISATION AND NATIONAL AND INTERSTATE ASPECTS

Official Year Book No. 51, pages 228–31, contains a description of recent developments in the measurement of Australia's water resources. For information concerning general, descriptive and historical matter *see also* Year Book No. 37, pages 1096–1141.

An article on droughts in Australia appeared in Year Book No. 54, pages 991–6.

For further details on geographical and climatic features determining the Australian water pattern, *see* the chapter Physical Geography and Climate; on water supply and sewerage in metropolitan areas, cities and towns, the chapter Local Government; and on the generation of hydro-electric power, the chapter Electric Power Generation and Distribution, of this issue.

A series of maps showing the location of major dams and reservoirs and the various irrigation schemes operating in each of the States may be found on pages 259–65 of Year Book No. 46, and a map showing the extent of known artesian basins throughout Australia is shown on page 273 of Year Book No. 48.

### Water resources and their utilisation

#### Surface supplies

An assessment of Australia's surface water resources has been made, based on measured and estimated stream flows within 197 river basins, as follows. The total average annual discharge of Australian rivers has been assessed at 280 million acre feet. This can be divided into 108 million acre feet measured discharge and 172 million acre feet estimated for areas where there are generally no gauging records. For the whole area of Australia (approximately 3 million square miles) only 1.9 million square miles are regarded as contributing to stream flow (i.e. there is practically no flow from Western Plateau drainage division and from arid parts of other divisions).

The flow of Australian rivers is small in comparison with the flow of rivers in other continents, some examples of which, expressed as mean annual discharges in millions of acre feet, are: Amazon, 2,950; Mississippi, 465; Mekong, 405; Niger, 308; Volga, 205; and the ten major rivers of the United States of America in the aggregate, 900.

#### Major dams and reservoirs

The table below lists existing major dams and reservoirs, together with those under construction and those projected, at June 1971. The list is confined to dams and reservoirs with a capacity of 100,000 acre feet or more. There are many others of smaller capacity in Australia. As a general rule, the figures shown for the height of wall (feet) refer to the vertical distance measured from the lowest point of the general foundations to the 'crest' of the dam, i.e. the level of the roadway or walkway on the dam.

#### MAJOR DAMS AND RESERVOIRS IN AUSTRALIA

Name	Location	Capacity (acre feet)	Height of wall (feet)	Remarks
EXISTING DAMS AND RESERVOIRS				
Eucumbene	Eucumbene River, New South Wales	3,890,000	381	Part of Snowy Mountains Hydro-electric Scheme
Eildon	Upper Goulburn River, Vic- toria	2,750,000	260	Storage for irrigation and for the generation of electricity
Hume	Murray River, near Albury, New South Wales	2,480,000	167	Part of Murray River Scheme—Storage for domestic, stock and irrigation purposes. Hydro-electric power also developed
Miena	Great Lake, Tasmania	1,710,000	60	Storage for Poatina hydro-electric power station

MAJOR DAMS AND RESERVOIRS IN AUSTRALIA—*continued*

<i>Name</i>	<i>Location</i>	<i>Capacity (acre feet)</i>	<i>Height of wall (feet)</i>	<i>Remarks</i>
<b>EXISTING DAMS AND RESERVOIRS—<i>continued</i></b>				
Warragamba	Warragamba River, New South Wales	1,670,000	450	For Sydney water supply. Also provides for generation of hydro-electricity
Menindee Lakes Storage	Darling River, near Menindee, New South Wales	1,468,700	60	Part of Darling River Water Conservation Scheme
Burrendong	Macquarie River, near Wellington, New South Wales	1,361,000	250	Storage for rural water supplies and flood mitigation
Blowering	Tumut River, New South Wales	1,322,400	368	For regulation of discharges from stations of Snowy Mountains Hydro-electric Scheme, primarily for irrigation but also for hydro-electric power generation
Burrinjuck	Murrumbidgee River, New South Wales	837,000	264	Storage primarily for irrigation also production of hydro-electric power
Talbingo	Tumut River, New South Wales	747,000	530	Part of Snowy Mountains Hydro-electric Scheme
Somerset	Stanley River, Queensland	735,000	173	Brisbane-Ipswich water supply, flood mitigation and small hydro-electric power station
Jindabyne	Snowy River, New South Wales	558,000	235	Part of Snowy Mountains Hydro-electric Scheme
Lake Victoria	Murray River, near South Australian border, in New South Wales	551,700	..	Natural off-river storage for irrigation in South Australia. Storage improved by construction of embankments and control regulators
Wyangala	Lachlan River, New South Wales	987,100	280	Storage for domestic stock, and irrigation purposes
Lake Echo	Lake Echo, Tasmania	442,000	60	Storage for Lake Echo hydro-electric power station (and seven others downstream)
Clark	Derwent River, Tasmania	434,000	220	Storage for Butler's Gorge and Tarraleah hydro-electric power stations (and six others downstream)
Arthur Lakes	Source of Lake River, near Great Lake, Tasmania	410,000	50	Part of Great Lake hydro-electric power development
Keepit	Namoi River, near Gunnedah, New South Wales	345,300	177	Storage primarily for irrigation also production of hydro-electric power
Waranga	Goulburn River, Victoria	333,400	45	For irrigation storage
Tinaroo Falls	Barron River, North Queensland	330,000	155	For irrigation purposes in the Mareeba-Dimbulah area
Mokoan	Winton Swamp, near Benalla, Victoria	300,000	35	For irrigation storage
Glenbawn	Hunter River, near Scone, New South Wales	293,200	251	Storage for irrigation purposes and flood mitigation
Rocklands	Glenelg River, Victoria	272,000	93	Part of Wimmera-Mallee domestic and stock water supply system
Eppalock	Campaspe River, near Heathcote, Victoria	252,860	150	To supplement supply to Bendigo and for irrigation
Tantangara	Murrumbidgee River, New South Wales	206,000	148	Part of Snowy Mountains Hydro-electric Scheme
Devils Gate	Mersey River, North Tasmania	190,000	250	Storage for Mersey Forth power development
Avon	Avon River, New South Wales	173,800	232	Part of Sydney water supply
Upper Yarra	Yarra River, Victoria	162,000	293	For Melbourne water supply
Wuruma	Nogo River, Central Queensland	157,000	151	For irrigation along Burnett River
Glenmaggie	Gippsland, Victoria	154,300	121	Storage for irrigation
Lake St Clair	Central Highlands, Tasmania	154,200	..	Improved natural storage for eight Derwent River hydro-electric power stations
Wellington	Collie River, Western Australia	150,100	121	For supply of water to irrigation districts and to agricultural areas and country towns
Grahamstown	Grahamstown River, near Newcastle, New South Wales	147,000	35	To supplement supply to Newcastle and district
Koombooloomba	Tully River, North Queensland	146,000	170	For hydro-electric and irrigation purposes
Serpentine	Serpentine River, Western Australia	144,000	171	For Perth water supply
Cethana	Mersey River, North Tasmania	143,000	360	Storage for Mersey Forth power development
Lake Brewster	Lachlan River, near Hillston, New South Wales	123,900	..	Storage of rural water supplies for the lower Lachlan
Cairn Curran	Loddon River, Victoria	120,600	144	For irrigation storage
Rowallan	Mersey River, North Tasmania	110,000	140	Storage for Mersey Forth power development
Eungella	Broken River, North Queensland	106,000	160	Provision of cooling water for Collinsville power station, supply to Collinsville town and for irrigation purposes

MAJOR DAMS AND RESERVOIRS IN AUSTRALIA—*continued*

Name	Location	Capacity (acre feet)	Height of wall (feet)	Remarks
<b>DAMS AND RESERVOIRS UNDER CONSTRUCTION</b>				
Lakes Gordon and Pedder	South-west Tasmania: Gordon River . . . . . Serpentine River . . . . . Upper Huon River . . . . . Lake Edgar . . . . .	9,440,000 2,400,000	450 135 160 50	Storage for Gordon River power development
Ord River (main)	Near Wyndham, Western Australia	4,600,000	300	
Dartmouth(a)	Mitta Mitta River in North-Eastern Victoria	3,000,000	590	
Fairbairn	Nogo River, Central Queensland	1,170,000	160	
Copeton	Gwydir River, New South Wales	1,105,000	357	For irrigation storage
Monduran	Kolan River, near Gin Gin, Queensland	475,000	171	For irrigation storage
Ross River	Near Townsville, Queensland	338,000	115	Flood mitigation and water supply to Townsville (First and Second Stages)
Cardinia	Near Emerald, Victoria	234,000	270	For off river storage for Melbourne water supply
South Dandalup	Dandalup River, Western Australia	168,500	140	For Perth water supply
<b>DAMS AND RESERVOIRS PROJECTED</b>				
Buffalo (second stage)	Buffalo River, near Myrtleford, Victoria	800,000	260	For irrigation storage
Warkworth	Wollombi Brook, Hunter Valley, New South Wales	406,000	130	Flood mitigation and irrigation dam for Hunter Valley
Windamere	Cudgegong River, New South Wales	280,000	200	For irrigation storage
Pike Creek	Near Stanthorpe, Queensland	200,000	150	For irrigation, part of Dumaresq-Barwon Border Rivers Scheme
North Pine	North Pine River, near Petrie, Queensland	164,000	142	To supplement supply to northern Brisbane area
Tallowa	Shoalhaven River and Kangaroo River Junction, New South Wales	120,000	140	Water supply and pumped storage power development

(a) See page 844.

**Irrigation**

For some brief remarks on the history of irrigation in Australia see issues of the Year Book prior to No. 39. An article on the conservation and use of water in Australia appeared in Year Book No. 37, page 1096 and subsequent developments have been covered in later numbers of the Year Book.

**Irrigation research**

Comprehensive programmes of research and investigation are being pursued by State water and agricultural authorities and the Commonwealth Scientific and Industrial Research Organization, often in collaboration. Special attention is being given to the following: high water tables due to the application of water; surface accumulation of salt and other soil changes associated with irrigation; methods of applying water efficiently; soil treatments to improve the physical condition of irrigated heavy clay soils; the utilisation of irrigated pastures by stock; and growth problems affecting plants and trees and reduction of salinity in river systems.

The Commonwealth Scientific and Industrial Research Organization conducts research on irrigation and irrigated crops at a number of its research stations and laboratories. The Division of Irrigation Research at Griffith (New South Wales), is investigating ways of limiting the degradation of land by irrigation, improving the quality and range of irrigated crops, and assessing the amount of water required by irrigated crops and the most economical means of applying it. The crops being studied include citrus, cotton, rice, lucerne and vegetables. Design criteria for irrigation channel networks are being studied to help solve problems related to the transient flow in natural and artificial channel systems. The Division of Environmental Mechanics at Canberra (Australian Capital Territory) studies water movement in soils, evaporation from field crops, water movement in plants and the physics of water stress. Summer forage crops, winter legume crops and irrigated pastures are



being investigated by the Division of Plant Industry at Swan Coastal Plain (Western Australia). Salt tolerant rootstocks for grape vines and other problems of grapes and pome fruits are being evaluated at Merbein (Victoria) and Adelaide (South Australia) by the Division of Horticultural Research. The Division of Land Research conducts research on a number of irrigated crops, including rice, safflower, linseed and cotton at the Kimberley Research Station (Western Australia) and tobacco at Mareeba (Queensland). The Division has also carried out a number of hydrological investigations on the utilisation of underground water for irrigation and is studying infiltration characteristics of soils. The Division of Applied Geomechanics is studying the engineering aspects of water movement through earth embankments. The Division of Soils is studying the rate of recharge of aquifers in the south-east of South Australia and the effect that the type of plant cover (grassland or forest) has upon that rate. This Division is also looking at the effect that clearing has upon the salinity of water obtained from catchments in the south-west of Western Australia.

The Irrigation Research and Extension Committee plays an important part in the agricultural activity of the Murrumbidgee Irrigation areas and associated districts, and the Coleambally Irrigation Area. It is representative of the New South Wales Department of Agriculture, the Commonwealth Scientific and Industrial Research Organization, the Rural Bank of New South Wales, the Soil Conservation Service of New South Wales, the Water Conservation Service of New South Wales, the Rice Marketing Board of New South Wales, the Wine Grape Marketing Board of New South Wales, co-operative and secondary industries, and farmers' organisations. Finance is provided by these authorities on an agreed basis. The objectives are: to enable the agricultural extension services to the farmers in the defined sub-region to be continued and developed; to provide a system for advising on local agricultural policy and organisation; to provide means for farmer opinion to have due weight in the consideration of regional agricultural administration and policy; to achieve a unified approach to sub-regional extension in all branches of agriculture; to advise on the research needs of the sub-region and to co-ordinate the agricultural research of the various rural institutions working therein; to achieve close liaison between research and extension; and to conduct research in extension methods.

Two other organisations with similar objectives are the Victorian Irrigation Research and Promotion Organisation which operates from Shepparton, and the Murray Research and Extension Committee centred at Deniliquin.

#### **Preservation of catchments**

Since water conservation commences on the catchments it is becoming increasingly recognised that anything which interferes with catchment efficiency affects the quantity of water available for all purposes. Active steps are being taken to counteract soil erosion, to conserve soil generally, and to minimise the effects of floods, overstocking, bush fires, and the destruction of vegetative cover. All States and the Commonwealth have initiated forestry policies which provide for reafforestation and the preservation of catchments. In recent years efforts to counteract soil erosion have been intensified, and there is some evidence of a more unified approach to catchment, water, forestry, and land use, factors regarded as parts of a single problem.

#### **Sub-surface supplies**

Much of Australia's underground water is obtained from artesian and sub-artesian basins and is used for stock purposes and domestic use. These supplies are indispensable in the dry areas which comprise most of the inland and extensive coastal areas as well. The quality of water ranges from usable to very saline.

Considerable use is also made of sub-surface water, other than pressure water, from localised groundwater basins, particularly in the well-settled areas. The water is used mainly for domestic and stock purposes. Compared with other countries with similar rainfall and climate, underground water is not used extensively for town and individual industrial supplies and irrigation, but its use for these purposes is increasing.

*Artesian and sub-artesian supplies.* Pressure water (either artesian or sub-artesian), variable in quantity and quality, is obtainable in many parts of Australia, from the various artesian basins extending over about half the continent.

The Great Artesian Basin, the most extensive in the world, underlies an area of approximately 676,250 square miles, comprising about 421,000 in Queensland, 135,000 in South Australia, 81,250 in New South Wales and 39,000 in the Northern Territory. A table showing the principal defined water-bearing basins in Australia is shown on the following page.

More than 18,000 artesian bores have been drilled within the Great Artesian Basin, while the daily free discharge from all bores continuing to flow in Australia has been stated as exceeding 350 million gallons, of which the loss by evaporation and seepage has been estimated at more than 90 per cent. Sub-artesian bores and wells throughout Australia number more than 200,000.



Artesian water generally is good stock water, but most is unsuitable for plant life; in certain areas sub-artesian waters are suitable for all uses. Some of these areas are in the Canning, Murray, Georgian and Barkly, Perth, Ord-Victoria, Pirie-Torrens and Adelaide Basins. In the Eucla Basin and parts of the Murray and Pirie-Torrens Basins the water is of poor quality, being barely suitable for stock.

In common with other countries possessing artesian supplies, Australia has been faced with the problem of flow diminution. It was recognised early that flows were diminishing as more bores were drilled, but it is now considered that while many of these bores will ultimately cease to flow, others will assume a perpetually steady rate of flow, corresponding with the average recharge from rainfall absorbed by permeable outcrops, mainly sandstone and limestone. Diminution in flows from artesian bores has emphasised the need to eliminate wastage as much as possible. Licences issued for the construction of new artesian bores prohibit the distribution of water through drains, channels, etc., as formerly, and the supplies must be confined to the borehead or piped to appropriate watering points.

#### PRINCIPAL WATER-BEARING BASINS IN AUSTRALIA

Name	State	Geological age of chief aquifers	Approximate area	Depth to pressure water
			square miles	feet
Great Artesian	Queensland, New South Wales, South Australia and Northern Territory	Mesozoic	676,250	Up to 7,000
Canning	Western Australia	Mesozoic-Palaeozoic	150,000	100 to 1,800
Murray	Victoria, New South Wales and South Australia	Miocene-Eocene	109,000	100 to 1,300
Georgian (including Barkly and Daly)	Northern Territory, Queensland	Cretaceous, Ordovician, Cambrian, and Upper Proterozoic	108,000	150 to 1,000
Eucla	Western Australia, South Australia	Pliocene-Miocene	74,000	300 to 2,000
Carnarvon	Western Australia	Cretaceous, Permian	45,000	200 to 4,000
Perth	Western Australia	Recent, Jurassic	21,000	200 to 2,500
Western District (Otway)	Victoria	Pleistocene-Upper Cretaceous	13,000	100 to 4,500
Basins of Ord-Victoria region	Northern Territory, Western Australia	Mainly Cambrian, and Permian	12,000	200 to 1,000
Pirie-Torrens	South Australia	Recent, Pleistocene	9,000	Up to 600
East Gippsland	Victoria	Pleistocene-Eocene	3,500	200 to 3,500
Adelaide	South Australia	Recent, Oligocene	1,100	200 to 600

*Shallow groundwater.* Shallow groundwater supplies are used in various parts of Australia for industry, irrigation, stock, and domestic purposes. Two examples of the use of these shallow supplies for industrial and domestic purposes occur in New South Wales. The Hunter District Water Board pumps up to 15 million gallons a day (average use over 30 years is 9.2 million gallons per day) for general use from the Tomago coastal sands near Newcastle, and at Botany, Sydney, private industry pumps 8-10 million gallons a day for its own use from similar sands. Exploration of the coastal sands north of the Tomago Sands has revealed a further potential production of 25 million gallons a day. Examples of the use of shallow groundwater supplies for irrigation include the Burdekin Delta and the Bundaberg area in Queensland. In the Burdekin Delta, which covers an area of some 200 square miles, the present extraction for irrigation from underground sources is in the region of 200,000 acre feet per annum (about 150 million gallons a day) and in the Bundaberg area it is approximately 50,000 acre feet per annum (about 37 million gallons a day).

Schemes for artificial recharge of underground supplies have been implemented on both sides of the Burdekin River delta. Diversions from unregulated river flows of 61,000 acre feet per annum to the north side and of 40,200 acre feet per annum (when available) to the south side have been authorised.

In recent years there has been a marked increase, particularly in Queensland, New South Wales and Victoria, in investigation into the groundwater resources of river and coastal alluvium for irrigation and town water supplies.

### National and interstate aspects

In terms of the Commonwealth Constitution primary responsibility for control and conservation of water rests with the individual State Governments. The Commonwealth Government is responsible for matters relating to water in its Territories. However, because political boundaries sometimes intersect river valleys and underground water basins, co-operation between Governments has been necessary to develop resources in certain cases. Specific examples of Commonwealth-State and interstate co-operation and approach are given in the following paragraphs.

#### Australian Water Resources Council

The Australian Water Resources Council was established by joint action of the Commonwealth and State Governments in 1962. The council comprises Commonwealth and State Ministers primarily responsible for water resources, with the Commonwealth Minister for National Development as Chairman, and is serviced by a Standing Committee consisting mainly of the heads of Departments responsible to these Ministers, and by a number of technical committees, including one on water quality.

The primary objective of the Council is the provision of a comprehensive assessment on a continuing basis of Australia's water resources, and the extension of measurement and research to provide a sound basis for the planning of future development. In terms of its objectives and functions, the Council has dealt with a wide range of topics, making recommendations and stimulating action by appropriate bodies.

An accelerated water resources measure programme involving many more new or improved gauging stations and groundwater investigations by Commonwealth and State Government authorities began in 1964-65. The Commonwealth Government approved extension of the programme until 30 June 1973. In addition to its own commitments in the Territories, the Commonwealth is assisting the State Governments with their programmes of water resources investigations. Since 1962-63, the total annual expenditure on this programme by Australian Governments has increased more than three-fold.

The Commonwealth Government has provided \$400,000 during the three years ended 30 June 1971 for the Water Research Fund administered by the Council which has approved eighteen projects in a new research programme. This programme, aimed at improving the efficiency of water management in Australia, complements research already undertaken by Commonwealth agencies, universities and other organisations. For the triennium to 1974 the Commonwealth Government has allocated \$700,000.

Research results published or on open file, deal with a number of topics, for example.

Hydrology of small rural catchments in Australia, effects of land management on quantity and quality of available water, Australian desalination plants, streamflow measurement, evaporation studies, bore logging, and extraction of water in unconsolidated sediments.

The Council has given attention to the collation of available data on Australia's water resources. In 1965, a *Review of Australia's Water Resources (Stream Flow and Underground Resources)* 1963 was published, this being the first official assessment. A *Review of Australia's Water Resources (Monthly Rainfall and Evaporation)* by the Bureau of Meteorology was issued in 1969. Other council publications include a twice a year Newsletter, a Hydrological Series, a technical paper series, a Water Resources Research Inventory (published annually), a Stream Gauging Information Catalogue (published five-yearly with annual supplements) and miscellaneous publications. Systematic publication of information is encouraged.

The Council continues to support Australian participation in the scientific programme of the International Hydrological Decade (1965-74). An important contribution follows from the decision of the Council to establish ninety-three representative basins throughout Australia for detailed hydrological studies. The continuance and introduction of post-graduate study in hydrology is being encouraged at the universities. Under the auspices of the Council, a Groundwater School and a Colloquium for Hydraulics Laboratory Staff are held at about two-yearly intervals.

#### National Water Resources Development Programme

In developing water resources, the Commonwealth Government's role in the past, while important, had been confined to assisting special projects or areas, e.g. the Snowy Mountains Scheme, participation in the River Murray Commission, and financial support for individual State projects such as the Ord River project. However, the National Water Resources Development Programme, announced in November 1966, represents a very important move towards closer collaboration between State and Commonwealth Governments, and a more continuing and detailed involvement by the Commonwealth in the development of Australia's water resources.

Under the National Water Resources Development Programme the Commonwealth has undertaken to provide grants to the States amounting to a total of about \$50,000,000 over five years for water conservation works aimed at reducing the hazards of droughts and expanding primary production. The grants under this programme apply to the Emerald dam and irrigation project in Central Queensland (\$20,000,000); two Victorian schemes to reduce salinity levels in the Murray River (\$3,600,000); Tailem Bend-Keith pipeline, South Australia (\$6,000,000); Copeton dam on the Gwydir River, New South Wales (\$20,000,000); King River dam, Victoria (\$4,000,000); and the Cressy-Longford irrigation scheme, Tasmania (\$750,000). In October 1969 the Commonwealth undertook to provide a further sum of \$100,000,000 under this programme. Further grants made are for major irrigation works in the Bundaberg region, Queensland (\$12,800,000), for flood mitigation works in New South Wales (\$9,000,000) and \$4,650,000 for assistance with construction of the Pike Creek Dam on the New South Wales-Queensland border rivers system. Commonwealth financial assistance to water resources measurements and investigations by the States is now included under this Programme.

Proposals submitted by the States are examined by the Commonwealth to determine which are suitable, from a national point of view, for inclusion in the Programme, and accordingly grants are announced from time to time.

### Murray River scheme

The Murray River and its tributaries form the largest river system in Australia. The catchment is approximately 408,000 square miles, or one-seventh of the area of the Australian continent, comprising five-sixths of New South Wales, over one-half of Victoria, one-sixth of Queensland and approximately one-fourteenth of South Australia. The Murray proper is 1,600 miles long. Its main tributaries are the Darling (1,700 miles), the Murrumbidgee (980 miles), and the Goulburn (350 miles). The average annual flow of each of the chief contributory streams is as follows: Upper Murray, including the Mitta Mitta and Kiewa Rivers, 3,820,000 acre feet; Darling River, 2,820,000 acre feet; Goulburn River (including Broken River), 2,580,000 acre feet; Murrumbidgee River, 2,050,000 acre feet; and Ovens River, 1,266,000 acre feet. Irrigated production in the Murray River Basin is mainly grapes for wine, dried fruits, fresh fruits, rice, vegetables, dairy produce, wool, and fat lambs.

*River Murray Waters Agreement.* For a brief summary of historical events leading up to the River Murray Agreement (1915) by the Governments of the Commonwealth, New South Wales, Victoria, and South Australia see issues of the Year Book prior to No. 39. Under the Agreement construction works are carried out by the States (which are also responsible for maintenance) subject to the approval and direction of the River Murray Commission. The Agreement provides that the minimum quantity of water to be allowed to pass for supply to South Australia in each year shall be sufficient to maintain certain specified flows in the lower river varying from 47,000 acre feet a month in the winter months to 134,000 acre feet a month in the four summer months of maximum demand—the total amounting to 1,254,000 acre feet over twelve months. The flow at Albury is shared equally by New South Wales and Victoria, and each of these States has full control of its tributaries below Albury, subject in each case to the fulfilment of the South Australian allocation. For a brief outline of the operation of the Agreement prior to 1949 see Year Book No. 40, page 1065, and earlier issues.

At a conference of Ministers held in 1949 to consider the diversion of the Snowy River it was decided that, by diversion of streams in the Snowy Mountains area, an average of approximately 440,000 acre feet per annum would be added to the Murray River (see Snowy Mountains Hydro-electric Scheme, page 845) and that increased storage should be provided in order to give additional regulation of the Murray River itself as well as to provide for regulation of the diverted waters. Hydro-electric potentialities would also affect the size of the storage.

The River Murray Commission investigated the position and subsequently recommended to the contracting Governments that the River Murray Waters Agreement be amended to provide for enlargement of the Hume Reservoir by 500,000 acre feet to approximately 2,500,000 acre feet. A conference of Ministers in 1954 agreed to the enlargement, and it was also agreed that the Commission should be given power to construct regulators and to carry out such other work on the Murray River between Tocumwal and Echuca as it considered necessary to reduce the losses from the regulated flow in that stretch of the river. The amended Agreement was ratified in the Parliaments of the Commonwealth and the three States and was proclaimed on 7 April 1955. In view of the proposed diversions by the Snowy Mountains Authority to and from the Murray River, and for other reasons, amendments to those sections of the River Murray Waters Agreement dealing with the distribution of the waters of the Murray were considered desirable. Following ministerial conferences, amendments were ratified by the four Parliaments concerned, and came into force on 6 November 1958.

Further amendment of the Agreement to provide for the construction of a storage of approximately 5,000,000 acre feet capacity at Chowilla in South Australia was ratified by legislation in the Commonwealth and State Parliaments and came into force on 30 April 1964. However, in view of the greatly



increased costs by the time the project came to tender in 1967 and other significant factors (including water quality in the Lower Murray) which had arisen in the interim, the River Murray Commission resolved that, pending further investigations, construction of Chowilla Dam should be deferred. Further investigations then followed, including a re-assessment of the likely yield from both Chowilla and alternative storages on the Upper Murray and Mitta Mitta Rivers. Following careful consideration of this re-assessment, the River Murray Commission in February 1969 agreed that a 3,000,000 acre feet storage at Dartmouth on the Mitta Mitta River provided the greatest overall benefits in terms of cost and yield and should be the next development of the resources of the River Murray. The question of sharing the benefits could not be resolved by the Commission and was therefore referred to the respective Governments. Subsequently, Ministers representing the four Governments concerned met in March 1969 and agreed on conditions for the construction of the Dartmouth Project and for the sharing of the increased system yield between Victoria, New South Wales and South Australia. Among other things, the meeting of Ministers agreed to continue the Menindee Lakes Agreement in perpetuity.

The Commonwealth Government has offered to assist the three States with financing the project by way of a loan to the extent of 50 per cent of each State's contribution. At the same time the Commonwealth itself will make its own quarter contribution of the cost of the project.

Although each of the four Parliaments passed Acts in 1970 and 1971 ratifying the appropriate amendments to the River Murray Waters Agreement which, amongst other things, provides for the construction of Dartmouth Dam, it is necessary that Acts be proclaimed before work can proceed on design and construction.

Inflows to the Murray System during the 1970-71 year were well above average. Storages were maintained at greater than 90 per cent of total available storage capacity until the end of January 1971. Two major floods occurred in the Upper Murray during the spring and the Darling experienced a major flood during the summer. The floods from the Upper Murray catchment occurred in August and September and these combined with flood flows from the Murrumbidgee, progressed downstream, passing Blanchetown in South Australia during early December. The flood in the Darling was caused by a succession of flood rains in its upper catchment during January and February 1971. The peak of this flood passed Bourke during early March and reached the Murray at the end of May. Of the total flow of the River Murray and its tributaries in 1970-71, 3,176,000 acre feet was diverted and impounded by the State of New South Wales and 2,872,000 acre feet by Victoria and 381,000 acre feet was diverted by South Australia. During the year, 9,032,000 acre feet passed to South Australia compared with a figure of 4,471,000 acre feet during the year 1969-70. The actual diversion from the River Murray itself in 1970-71 by New South Wales was 1,249,000 acre feet and by Victoria 1,307,000 acre feet.

*River Murray Works.* One of the major works of the Murray River scheme is the Hume Reservoir, situated just below the junction of the Murray and Mitta Mitta Rivers, ten miles above Albury, forming a lake of 50,000 acres. Work on the enlargement of the reservoir to its approved capacity of 2,480,000 acre feet was completed in 1961.

The Yarrawonga Diversion Weir, which was completed in 1939, raised the river level so that water could be diverted by gravitation into main channels constructed on either side of the river. Between the Yarrawonga Weir and the Murray mouth, thirteen weirs and locks have been built. Two flood diversion weirs have been constructed on the Murrumbidgee—one between Hay and the Lachlan junction and the other below the Lachlan junction.

The Mulwala Canal, supplied from the Yarrawonga Weir, has an off-take capacity of 2,500 cubic feet a second, serving 1,800,000 acres of land in New South Wales. The Yarrawonga Channel, on the Victorian side, has an off-take capacity of 1,250 cubic feet a second, serving 300,000 acres. Not all of this area is irrigated.

Adjoining the river in New South Wales, and 35 miles from the Murray-Darling junction, Lake Victoria storage, with a surface area of 27,670 acres, was completed in 1928. The water released from Lake Victoria is used by the South Australian settlements. The inlet channel to Lake Victoria was enlarged in 1957 to permit greater diversion of periodical flood flows of short duration.

Five barrages across channels near the Murray River mouth connecting Lake Alexandrina with the sea were completed in 1940 to prevent ingress of salt water to Lakes Alexandrina and Albert and to the lower river, thereby increasing the productivity of adjacent lands. The structures maintain a sufficiently high level for 50 miles up river to permit watering by gravitation of a considerable area of reclaimed river flats. The total distance across the barrages and intervening islands is 15 miles.

In addition to the works carried out under the auspices of the Commission, the separate States have constructed thousands of miles of distribution channels and have provided a number of storages on the tributaries, thereby contributing materially to the large amount of irrigation development in



the Murray Basin. The main storages are: New South Wales—Menindee Lakes Storage (Darling), Blowering (Tumut), Burrinjuck (Murrumbidgee), Keepit (Namoi), Burrendong (Macquarie) and Wyangala (Lachlan); Victoria—Eildon (Goulburn), Waranga (Goulburn), Eppalock (Campaspe) and Cairn Curran (Loddon). Details of these and other State works on Murray tributaries will be found in the sections dealing with State systems.

#### **New South Wales-Queensland Border Rivers Agreement**

The catchments for the border streams of New South Wales and Queensland (2,000 square miles) extend to the granite areas in the vicinity of Tenterfield (New South Wales) and Stanthorpe (Queensland), and elevation rises to 3,000 feet. Average rainfall is 30 inches. The catchments and the areas suitable for irrigation are approximately equal in each State. Climatic conditions are such that from April to October it is necessary to supplement rainfall by irrigation to stabilise and increase production. The capacity of the area to grow lucerne and tobacco under irrigation has already been demonstrated. Other possible development of the area includes irrigation of cotton, root crops, cereals, and citrus fruit, and expansion of the fat stock industry.

The New South Wales-Queensland Border Rivers Agreement came into effect on 1 July 1947. The Agreement provides for the construction of certain works on those sections of the Severn, Dumaresq, MacIntyre, and Barwon Rivers, which constitute part of the boundary between New South Wales and Queensland for the furtherance of water conservation, water supply and irrigation in those States.

The works to be constructed comprise a dam on the Dumaresq River at a site to be selected by the Water Conservation and Irrigation Commission of New South Wales (the constructing authority) to give a storage basin with a capacity as large as is reasonably practicable and not less than six nor more than twelve weirs as may be found necessary to meet the requirements of irrigation along the rivers. Provision is also made for the construction of not more than four regulators in the effluents from the barrier rivers and for the taking over of the existing weir on the MacIntyre River at Goondiwindi and the existing weir on the Barwon River at Mungindi (the Irrigation and Water Supply Commission of Queensland is the constructing authority for new weirs and regulators). The cost of these works and of administration are to be borne by the States in equal shares. The Agreement further provides that the water discharge from the Dumaresq storage, whether by regulated or unregulated flow, shall be available to the two States in equal shares.

After unfavourable foundation conditions were disclosed at several dam sites on the Dumaresq River, investigations were extended to tributary streams, and superficially suitable sites located on Pike Creek and the Mole River. A geophysical survey was made at each of these sites and preliminary comparative estimates were prepared to determine the relative economy of providing one large storage at Mingoola or two smaller storages on the tributaries. Following exploratory drilling of the tributary sites, a report dealing with alternative storage proposals and possible amendments to the existing Agreement was submitted to the participating States. Consequent upon these investigations an Amending Agreement was executed between the States of New South Wales and Queensland which included, *inter alia* provision for the construction of storages on Pike Creek (Queensland) and the Mole River (New South Wales). The new agreement also provided for investigation and construction of works for the improvement of flow and of the distribution of flow in streams which intersect the New South Wales-Queensland border west of Mungindi.

Works completed under the original agreement include Bonshaw and Cunningham Weirs on the Dumaresq River, a weir and regulator on the Barwon River at the off-take of the Boomi River, and a low level weir to establish a pumping pool at Glenarbo on the Dumaresq River. The existing Goondiwindi and Mungindi Weirs are being maintained, operated and controlled by the Queensland Irrigation and Water Supply Commission. Until a dam has been constructed it is unlikely that any other weirs will be required.

#### **Snowy Mountains Hydro-electric Scheme**

Following a comprehensive investigation into both the water and power potential of the Snowy River waters by a Technical Committee representative of the Commonwealth and the States of New South Wales and Victoria in 1947 and 1948, and the submission by the Committee of reports in 1948 and 1949, the Commonwealth Parliament passed the *Snowy Mountains Hydro-electric Power Act* 1949 setting up an Authority to implement the proposals agreed upon.

The basis of the proposals was to impound the Snowy River waters at high elevations and, by diverting them into tunnels passing under the Alps, to use their potential power for the generation of electricity and then to discharge them into the Murray and Murrumbidgee River systems for use in the irrigation areas.

The scheme involves two main diversions, that of the Eucumbene, a tributary of the Snowy, to the Upper Tumut River, and that of the main stream of the Snowy River at Island Bend and Jindabyne to the Swampy Plain River. In addition, works required to make use of the waters of the Upper Murrumbidgee, the Upper Tumut, the Upper Tooma and the Geehi Rivers for power generation also provide additional regulation of these streams, and this makes more water available for irrigation. Details of the two trans-mountain diversions and the associated power works together with details of progress and construction are given in Chapter 27, Electric Power Generation and Distribution.

The average total gain by diversion and regulation now that all storage works are completed is assessed at 1,120,000 acre feet per annum to the Murrumbidgee and 800,000 acre feet per annum to the Murray.

### International aspects

Australia maintains contact with international developments in water conservation and irrigation through its membership of the International Commission on Irrigation and Drainage since 1952. This Commission was set up in India in 1950 in order that the technical experience of all countries might be pooled for the benefit of all, and to promote the development and application of the science and technique of irrigation and drainage in the engineering, economic and social aspects. The Commission is constituted of National Committees of participating countries, and sixty countries, including Australia, have so far been admitted to membership.

The Central Office of the International Commission on Irrigation and Drainage is situated in New Delhi, India. Congresses, which are held every three years, have taken place in India, Algeria, the United States of America, Spain, Japan, in that order and again in India in 1966. The seventh Congress was held in Mexico in April 1969.

An Australian National Committee was established following a meeting of representatives of Australian authorities held in Melbourne in 1953. At that meeting it was decided, *inter alia*, 'that a National Committee should be formed and that the National Committee would consist of representatives of Government Departments, Statutory Authorities, firms, and individuals actively interested in irrigation and drainage'. The Committee meets annually.

### STATES AND TERRITORIES

The foregoing text deals with water conservation and irrigation in Australia generally and with international, national and interstate aspects. The following survey covers the local pattern of water resources and the steps taken by the State Governments to bring about their development. In the various States water policies tend to assume a distinctive and characteristic pattern closely allied with climatic conditions and specific local needs.

In Victoria almost every form of water scheme is in operation, in New South Wales major emphasis at present is on irrigation and stock development in the dry areas along the Murray and Murrumbidgee Rivers, though a substantial scheme of intensive irrigation is being conducted in the Murrumbidgee Irrigation Areas. In Queensland, up to the present, the predominant emphasis has fallen on water (mainly underground sources) for stock, and the development of small irrigation schemes in sub-humid and humid areas, especially to stabilise sugar production. Apart from regular irrigation practices along the Murray River, South Australian authorities are vitally concerned with reticulated supplies for rural areas and towns. Western Australia has developed unique rock catchments and piped supplies for agricultural areas and towns in dry districts. Tasmanian interest relates almost exclusively to hydro-electric generation. The Northern Territory is concerned primarily with stock supplies and the safeguarding of long stock routes.

### New South Wales

On page 1110 of Year Book No. 37 information is given on the pattern of rainfall and the history of irrigation in New South Wales. (See also the chapter Physical Geography and Climate of this issue.)

### Administration

The Water Conservation and Irrigation Commission of New South Wales consists of three members appointed by the Governor. The operations of the Commission cover water conservation, control of irrigation areas, the establishment, operation and maintenance of works for domestic and stock water supply, irrigation districts, flood control districts, sub-soil drainage districts, constitution of water trusts, the issue of licences for private irrigation, artesian and shallow boring, assistance under the provisions of the farm water supplies scheme, and river improvement works.

Under the Water Act, 1912–1955 the right to the use and flow, and the control of water in all rivers and lakes which flow through, or past, or are situated within, the land of two or more occupiers, is vested in the Commission for the benefit of the Crown. A system of licences operates for the protection of private works of water conservation, irrigation, water supply, drainage and prevention of inundation.

For particulars of the New South Wales–Queensland Border Rivers Agreement ratified by Acts of both States in 1947, *see* page 845 of this chapter.

### Schemes summarised

The bulk of irrigated land is along the Murray and its tributary the Murrumbidgee. Smaller areas are served by the Wyangala Dam, Lake Cargelligo and Lake Brewster on the Lachlan (a tributary of the Murrumbidgee), by Glenbawn Dam on the Hunter River, by Keepit Dam on the Namoi River, by Burrendong Dam on the Macquarie River, and by the Menindee Lakes Storage on the Darling River. None of the other rivers is regulated by large head storages, though weirs and dams have been provided for town supplies, etc. in many places. Copeton Dam on the Gwydir River is in the course of construction. In addition, substantial use is made of artesian and sub-artesian water in pastoral areas.

New South Wales legislation provides for the constitution and control of various schemes having different characteristics and including irrigation areas, irrigation districts, water trust districts, flood control and irrigation districts, and river improvement districts. There are nine irrigation areas, although two of these, Yanco and Mirrool, are generally described under the one heading, namely, the Murrumbidgee Irrigation Areas. The Areas are: The Murrumbidgee Irrigation Areas, consisting of 451,263 acres served with water through a channel system stemming from the river at Berembed Weir; the Coomealla Irrigation Area of 34,626 acres, served by pumping from the Murray; the Curlwaa Irrigation Area of 10,388 acres, supplied from the Murray by pumping; the Hay Irrigation Area of 6,850 acres, supplied with water pumped from the Murrumbidgee; the Tullakool Irrigation Area of 18,006 acres, supplied from the Edward River by diversion at Stevens Weir; the Buronga (8,739 acres) and Mallee Cliffs (1,900 acres) Irrigation Areas, served by pumping from the Murray; and the Coleambally Irrigation Area (234,637 acres), served by diversion from the Murrumbidgee River. All these Areas are administered by the Commission.

The capacities of the main storages for irrigation in New South Wales (in acre feet) are:

*Darling*—Menindee Lakes Storages (1,468,700);

*Murray*—Half share of Hume Reservoir, weirs and locks to Wentworth (1,351,420); Stevens Weir, Edward River (7,165);

*Tumut* (tributary of Murrumbidgee)—Blowering Dam (1,322,400);

*Macquarie*—Burrendong Dam (964,200 irrigation storage; 396,800 flood mitigation storage);

*Murrumbidgee*—Burrinjuck Dam (837,000); Redbank Weir (7,360); Maude Weir (6,740);

*Namoi*—Keepit Dam (345,300);

*Lachlan*—Wyangala Dam (987,139); Lake Brewster (123,900); Lake Cargelligo (29,430);

*Hunter*—Glenbawn Dam (185,300 acre feet irrigation storage; 107,900 acre feet flood mitigation storage);

*Belubula* (tributary of Lachlan River)—Carcoar Dam (30,000); and

*Snowy Mountains Hydro-electric Scheme*—Lake Eucumbene (3,890,000); Jindabyne Reservoir (558,000); Tantangara Dam (206,000).

The total length of supply channels, drains, escape channels and pipe lines constructed by the Water Conservation and Irrigation Commission in New South Wales is 5,227 miles. This comprises 3,564 miles of supply channels (including main canals), 1,594 miles of drains and escape channels, and 69 miles of pipe lines.



**Irrigated culture**

The following table shows details of the area of crops and pasture and the methods employed on land under irrigated culture during the 1970-71 season.

**AREA OF LAND UNDER IRRIGATED CULTURE: NEW SOUTH WALES, 1970-71**  
(Acres)

	<i>Method of irrigation</i>				<i>Total area</i>
	<i>Spray</i>	<i>Furrow</i>	<i>Flood</i>	<i>Multiple methods</i>	
Crops—					
Cereals—					
Barley . . . . .	2,515	1,067	21,211	106	24,899
Maize . . . . .	2,570	16,388	9,156	..	28,114
Oats . . . . .	16,387	1,618	28,043	189	46,237
Rice . . . . .	..	..	95,332	..	95,332
Sorghum . . . . .	5,466	14,436	26,013	960	46,875
Wheat . . . . .	4,886	6,797	123,772	1,003	136,458
Lucerne . . . . .	92,253 <sup>(a)</sup>	1,361	72,831	1,043	167,488
Cotton . . . . .	646	49,343	15,253	..	65,242
Fruit and Vines . . . . .	19,167	35,003	2,080	2,216	58,466
Tobacco . . . . .	2,707	254	81	..	3,042
Vegetables . . . . .	24,202	7,252	3,795	1,341	36,590
Other crops(a) . . . . .	5,371	11,311	33,346	511	50,539
<b>Total crops . . . . .</b>	<b>176,170</b>	<b>144,830</b>	<b>430,913</b>	<b>7,369</b>	<b>759,282</b>
Pastures . . . . .	76,815	8,892	765,825	8,450	859,982

(a) Includes fodder crops.

**Irrigation areas**

**Murrumbidgee.** This area, which consists of Yanco and Mirrool Irrigation Area, together with adjacent lands supplied under agreement, received 403,986 acre feet, nearly 17 per cent of the total water (2,554,301 acre feet) used within the State for stock, domestic and irrigation purposes. The area is served by the Burrinjuck Dam on the Murrumbidgee River and Blowering Dam on the Tumut River, which joins the Murrumbidgee River near Gundagai. The catchment of the Burrinjuck Dam is about 5,000 square miles and water storage in Blowering Dam is from the natural flow of the Tumut River and water released into that river from the Snowy-Tumut Development Section of the Snowy Mountains Hydro-electric Scheme. This includes water from the Eucumbene, Upper Murrumbidgee, Tooma and Upper Tumut Rivers. The dams also provide town supplies for Gundagai, Wagga, Narrandera, Hay, Balranald, and for towns served by the South-West Tablelands scheme.

Domestic and stock water and water for irrigation are supplied to the Irrigation Districts of Tabbita, Benerembah and Wah Wah, and the Flood Control and Irrigation District of Lowbidgee. Flood flows are relied on to serve the Lowbidgee district, and water is not released from the dams for that purpose. For other areas and districts, however, water is stored during the winter, fed by melting snows and spring freshets, and is released during the September-May irrigation season. To supply the Yanco and Mirrool Areas, water is diverted by Berembah Weir, into the main canal which has an off-take capacity of 1,600 cubic feet a second. The main canal has been completed to beyond Griffith, a distance of approximately 96 miles. These areas are served by approximately 797 miles of supply channels and pipes and 880 miles of drainage channels. In addition, approximately 444 miles of supply channel run through the Tabbita, Benerembah and Wah Wah District which are adjacent to the Areas.

The Water Conservation and Irrigation Commission controls land transactions and water supplies for the Murrumbidgee Irrigation Areas only, and has no jurisdiction over land transactions in the adjacent irrigation districts, although it is responsible for the operation and maintenance of the water supply in these areas. Other local government services, including electricity and town water supply, are provided by Councils. Land is disposed of by the Commission by purchase or under perpetual lease tenure or leased for short terms for grazing or cultivation. The area under occupation at 30 June 1971 was 409,706 acres including 31,715 acres held for short lease grazing, agriculture, etc.



The land on which the Murrumbidgee Irrigation Areas and associated districts are situated originally comprised large sheep stations and was sparsely populated, but at 30 June 1971 its population was approximately 30,000, that of Leeton Shire being 11,000 and that of Wade Shire 19,000. The principal products of the Murrumbidgee Irrigation Areas are wool, livestock for slaughtering, rice, citrus fruits, peaches and nectarines, grapes, tomatoes, peas, beans, and root vegetables. Rice growing was initiated on the Areas in 1924 and has since become the most important crop. In a normal season, the water supplied for rice represents about half the total delivered to the Areas.

*Other Irrigation Areas.* The Coomealla, Tullakool, Buronga, Mallee Cliffs, Hay, Curlwaa, and Coleambally Irrigation Areas follow the same administrative pattern as the Murrumbidgee Areas—that is, land transactions are administered by the Water Conservation and Irrigation Commission which is responsible also for the operation and maintenance of works to supply water.

### **Irrigation districts**

These districts are set up under the Water Act, 1912–1955 for (a) domestic and stock water supply and (b) irrigation. The essential difference between an 'Area' and a 'District' is that in the case of the former, all the land to be included in the area is acquired by the Crown and then subdivided into such number of separate holdings as may be determined. Within the District, however, existing ownership of land is not disturbed other than to acquire land required for water distribution works.

Since the completion of the Hume Reservoir, several such districts have been established along the Murray to utilise the New South Wales share of the storage. Water is not available for the whole of the 5,000,000 acres adjacent to the Murray in New South Wales, and therefore the schemes are based on 'extensive' irrigation, that is, water rights are allotted to holdings on the basis that only a portion of each holding (one acre in three, five or ten, according to the district, etc.) will be irrigated, but additional water, when available, may be obtained by landholders. 'Water right' means right to such a quantity annually of water, 12 inches deep, as will cover an area of one acre.

Water to serve Berriquin, Denibootea and Denimein Districts is diverted from the River Murray at Yarrowonga into the Mulwala Canal. Water for the Wakool Irrigation District and the Tullakool Irrigation Area is diverted from the Edward River at Stevens Weir, and a supplementary supply is also obtainable from Mulwala Canal. The total length of completed canals and channels in Berriquin District is 1,033 miles, comprising Mulwala canal 75 miles, Berrigan channel 22 miles, subsidiary channels 820 miles, escape channels 105 miles, and cross drainage channels 10 miles. Off-take capacity of the Mulwala canal is 5,000 acre feet a day. Wakool, with 428 miles of channels, contains 324 holdings, and the area developed by irrigation includes about one acre in six of the total area. Sheep raising and rice growing are the main industries. Considerable subdivision has occurred within the Berriquin District, and the proportion of the total area developed for irrigation is higher than in the case of Wakool. Sheep (including fat lambs), dairying, wheat, and rice growing are the main industries.

### **Water Trust Districts, Irrigation Trusts and Flood Control and Irrigation Districts**

The Water Act, 1912–1966 provides for the constitution of Trust Districts for domestic and stock water and irrigation, and empowers the Commission to construct, acquire or utilise necessary works. When the works are completed, they are handed over to trustees to administer. The trustees are elected by the occupiers of the land and act with a representative of the Commission. They are empowered to levy and collect rates covering the cost of the works repayable to the Crown by instalments and also the cost of operation and maintenance of the works. The rates are struck according to the area of land which benefits. The following are the water trusts, other than irrigation, as at present constituted (the area in acres of each district being shown in parenthesis): *Murray River*—Little Merran Creek (157,440), Bullatale Creek (68,320), Poon Boon (34,300), Minnie Bend Flood Prevention (2,190); *Murrumbidgee River*—Yanco, Colombo and Billabong Creeks (1,007,780); *Lachlan River*—Marrowie Creek (292,640), Torriganney, Muggabah and Merrimajeel Creeks (170,240), Ulonga (64,960), Micabil Weir (11,500), Condobolin West Weir (4,480); *Miscellaneous*—Great Anabranche of Darling River (959,184), Nidgery Weir (46,880) and Algdgerie Creek (9,760)—making in all a total area of 2,829,674 acres. Twelve of these trusts have been formed for the provision of water for domestic and stock purposes and one for flood prevention.

Irrigation Trusts are established under the same Act and are administered by trustees in a similar way. There are seven of these trusts.

The Lowbidgee Provisional Flood Control and Irrigation District, the first of its kind, was constituted in 1945. Its purpose is to provide flood irrigation for pasture lands on the lower Murrumbidgee by water diverted from the Maude and Redbank Weirs. Another district, Medgun, near Moree in the north-west, is also in operation.

### River, lake and farm water supplies

During recent years the number of licences and permits issued to individuals to draw water from rivers and lakes for irrigation have increased substantially, especially along the coastal streams in sub-humid districts where the value of supplementary irrigation is becoming more recognised as a means of stabilising production in dry months. There has also been a considerable increase along the Murrumbidgee, Lachlan, Namoi, and Macquarie Rivers.

Under the Farm Water Supplies Act, 1946, technical advice and assistance, and also financial assistance, are made available to help individual farmers and groups of farmers to provide and improve water supplies for domestic, stock and irrigation purposes by means of wells, bores, excavated tanks, weirs or dams, and flood and spray irrigation systems.

### Underground water

For information on underground water resources in New South Wales see Year Book No. 55 and earlier issues.

### Future programme

The programme of development in hand includes the provision of additional dams and storages, weirs, and flood mitigation and river protection works in various parts of the State. Work is continuing at Copeton Dam site on the Gwydir River. Legislation has been passed authorising the construction of Windamere Dam on the Cudgegong River, a dam on the Brogo River and existing legislation authorises the construction of a flood control and irrigation dam at Warkworth in the Hunter Valley. The Hunter River development, of which Glenbawn Dam is an integral part, incorporates an exceptionally fertile coastal valley, forming the hinterland to Newcastle, where the annual rainfall is not heavy and variations from month to month are considerable. The strengthening and enlargement of Wyangala Dam, on the Lachlan River, has been completed and storage capacity has been increased to 987,139 acre feet following installation of radial gates in the spillway. Within the new Coleambally Irrigation Area further development of farms has been carried out and water is being supplied by the Coleambally Canal which off-takes from the Murrumbidgee River at Gogeldrie Weir. At 30 June 1971, 341 large area farms and 22 horticultural farms had been allotted.

## Victoria

Particulars of the rainfall pattern of Victoria were given on page 1117 of Year Book No. 37. (See also the chapter Physical Geography and Climate of this issue.)

### Administration

Victorian Governments have been active in the development of country water supplies since the 1860s when major works to supply the Bendigo goldfields were undertaken. Local trusts to construct and operate waterworks under Government supervision were provided for in the *Water Conservation Act* 1881. Development under the trust system was greatly stimulated by the *Irrigation Act* 1886, which provided for the construction of national headworks by the State, and vested in the Crown the right to the use and control of all surface waters. By 1900 there were 33 irrigation trusts and 18 other rural water supply trusts, but the system of local control was then breaking down under financial difficulties.

The *Water Act* 1905 established the State Rivers and Water Supply Commission to take over the Irrigation Trust districts (except the still-existing First Mildura Irrigation Trust) and to exercise the State's functions in the further control and development of surface waters outside the metropolis. The Commission now supervises all private diversions from streams and directly administers irrigation districts covering 2,247,820 acres, rural waterworks and urban districts covering 12,127,000 acres, flood protection districts covering 148,850 acres, and urban water supplies serving 297,500 people. It also supervises the activities of local urban water supply authorities supplying 686,000 people in 267 towns, as well as 106 local sewerage authorities and 31 river improvement and drainage authorities.

### Works summarised

Since the State Rivers and Water Supply Commission began its operations in 1906 the capacity of storages under its control has been increased from 172,000 acre feet to 5,006,620 acre feet. In addition, Victoria has in effect a half share in River Murray Commission storages totalling 2,703,150 acre feet, bringing total capacity available to Victoria at 30 June 1971, to 6,358,190 acre feet, Most

of the water used from these storages is for irrigation. The area irrigated in 1970-71 totalled 1,459,621 acres (compared with 105,000 acres in 1906). Irrigation deliveries in 1969-70 totalled 2,181,469 acre feet. The value of irrigation production in 1969-70 was estimated at \$191,600,000. Of the total irrigation production about one-quarter was from lands irrigated by 'private diverters', i.e. irrigators who are authorised to take water from streams, lakes, etc., but who do not come within the boundaries of an irrigation district.

### Storages

Capacities of principal storages (in acre feet) and system totals at 30 June 1971 were as follows:

*Goulburn System*—Eildon, 2,750,000; Waranga, 333,400; total, 3,130,650;

*Murray System*—half share of Murray storages, 1,351,570; total, 1,392,430;

*Broken River System*—Nillahcootie, 32,260; Mokoan, 295,720; total, 327,980;

*Ovens System*—Lake Buffalo, 19,500; Lake William Hovell, 10,000; total, 29,500;

*Loddon System*—Cairn Curran, 120,600; Tullaroop, 60,000; Kerang Lakes, 57,700; total, 276,250;

*Campaspe-Coliban System*—Eppalock, 252,860; Coliban storages, 64,930; total, 317,790;

*Wimmera-Mallee Systems*—Rocklands, 272,000; Toolondo, 86,000; Bellfield, 63,680; total, 627,890;

*Macalister System*—Glenmaggie, 154,300; total, 154,340;

*Werribee-Bacchus Marsh*—total, 48,300;

*Mornington Peninsula*—total, 38,340.

### Irrigated culture

The following table shows details of the area of crops and pasture and the methods employed on land under irrigated culture during the 1970-71 season.

#### AREA OF LAND UNDER IRRIGATED CULTURE: VICTORIA, 1970-71

(Acres)

Methods of irrigation					
	<i>Spray</i>	<i>Furrow</i>	<i>Flood</i>	<i>Multiple methods</i>	<i>Total area</i>
Crops—					
Cereals . . . . .	1,122	366	31,618	1,306	34,412
Orchards . . . . .	14,398	14,583	18,164	6,292	53,437
Vineyards . . . . .	4,428	40,317	2,622	501	47,868
Vegetables . . . . .	34,256	7,734	1,797	770	44,557
Other crops(a) . . . . .	26,103	1,189	32,843	681	60,816
<b>Total crops . . . . .</b>	<b>80,307</b>	<b>64,189</b>	<b>87,044</b>	<b>9,550</b>	<b>241,090</b>
Pastures . . . . .	42,440	3,551	1,212,069	15,321	1,273,381

(a) Includes fodder crops.

### Irrigation systems

*Goulburn-Campaspe-Loddon.* The principal storage for Goulburn waters is Lake Eildon, which was completed in 1956, submerging the original 306,000 acre feet Eildon storage completed in 1927. For the distribution of additional supplies available from Eildon and from other new storages on the Loddon and Campaspe rivers it has been necessary to undertake major enlargements in the distribution system by a long-term programme of channel works which is still in progress. Deliveries during 1970-71 amounted to 998,252 acre feet, compared with 395,000 acre feet in 1954-55. Goulburn River water is diverted to the irrigation areas by gravitation from the pool formed by the Goulburn Weir, near Nagambie, completed in 1890 as a State work. The East Goulburn main channel of 1,000 cusecs capacity supplies the areas around Shepparton. Two 1,500 cusec channels to the west convey water to the off-river Waranga Reservoir and supply part of the Rodney area through off-takes on the way. From Waranga Reservoir there are two main outlets, one supplying the western part of the Rodney area and the other, of 1,200 cusecs capacity, supplying the Waranga Western Main Channel, which runs 230 channel miles west across the Campaspe and Loddon Valleys to beyond Birchip.



Flows in the Waranga Western Main Channel are augmented by the injection of Campaspe water through a pumping station of 200 cusecs capacity near Rochester. Supply to the Tragowel and Boort areas is augmented by gravitational diversion of Loddon water.

The gross area of holdings in the Goulburn–Campaspe–Loddon systems is 1,327,070 acres. The main products are dairy produce, fruit, wool, and fat lambs. Annual production of deciduous canning fruits in the eastern part of the system is about two-thirds of Australia's total.

*Murray River system.* Water is diverted from the Murray by gravity at the Yarrawonga Weir for the Murray Valley Irrigation Area and at the Torrumbarry Weir for the Torrumbarry irrigation system which extends to Swan Hill. Holdings in the Murray Valley area total 301,691 acres, devoted mainly to dairying, fat lambs and canning fruit. Holdings in the Torrumbarry system total 386,439 acres, devoted mainly to dairying and the production of fat lambs, with a concentration of vineyards, orchards and market gardens around Swan Hill.

Downstream from Swan Hill there are 5 districts supplied by pumping: the district of the First Mildura Irrigation Trust and the 4 Commission districts of Nyah, Robinvale, Red Cliffs and Merbein. These districts together serve 74,781 acres, producing mainly dried vine fruits, with some citrus fruits and table and wine grapes.

*Southern systems.* The Macalister district, covering 130,476 acres around Maffra and Sale, is supplied from the Macalister River, regulated by Lake Glenmaggie, and from the unregulated flow of the Thomson River. Dairy farming is the principal activity. The Bacchus Marsh and Werribee District, supplied from storages in the Werribee River only 20 miles west of Melbourne, cover 16,231 acres intensively developed for dairying and vegetables.

#### **Wimmera-Mallee domestic and stock supply system**

Storages in the Grampians in south-west Victoria ensure farm water supplies over an area of 11,000 square miles extending northward through riverless pastoral and cereal lands to the Murray. Farm dams throughout this region, which covers one-eighth of the total area of the State, are filled once each year, in the winter-spring season, through the medium of 6,600 miles of Commission channels and about 4,000 miles of private channels. Without this supply, occupation of the region would be extremely hazardous. Storage capacity has now been increased from 564,210 acre feet to 627,890 acre feet by construction of Lake Bellfield. Fifty towns, with a population of 46,000, receive their supply from the same system. Near Horsham and Murtoa, close to headworks in the south, a supply is maintained for the irrigation of an area of 7,500 acres, mainly for dairying.

#### **Drainage, flood protection and river improvement**

The largest work in this category undertaken by the State Rivers and Water Supply Commission is the Koo-wee-rup–Cardinia flood protection district embracing 89,245 acres of a continuous depression along the seaboard of Westernport. Once useless, indeed a hindrance to communication, this area now yields primary products worth several million dollars each year.

By the *River Improvement Act* 1948, the formation of local river improvement and drainage trusts under the supervision of the Commission has been greatly facilitated and since 1950, 29 such trusts have been formed (including the Dandenong Valley Authority). The importance of river improvement work is expected to continue to grow.

The Dandenong Valley Authority was created in 1963 by special legislation, with jurisdiction over the whole catchment of the Dandenong Creek (300 square miles) for purposes of arterial drainage, river improvement and flood protection. In June 1966 the Authority took over the Commission's Carrum Drainage District.

#### **Finance**

The net capital liability of the Commission at 30 June 1971 for works under its direct control was \$330.3 million. Eighty-seven per cent of the cost of capital and interest repayments was borne by the State. Total expenditure on irrigation was \$181.3 million; \$31.9 million on rural, domestic and stock supplies; \$55.5 million on urban supplies and \$2.5 million on flood protection. A further \$23.9 million (relating mainly to irrigation) was expended on headworks but has not yet been allocated to the above. The remaining \$35.2 million was for expenditure on storages for private diversion and to supplement supplies to local authorities, and for items such as loan flotation expenses, miscellaneous surveys and investigations, and buildings, plant and stores.



### Future programme

In July 1963 the Government announced plans for a long-term storage programme for irrigation purposes to cost a total of \$75 million between 1963-64 and 1973-74. This included the projected Chowilla Reservoir which will not now be constructed and the Lake Buffalo project, which has been deferred following the decision to construct Dartmouth.

Since the long-term storage programme came into operation, storages have been completed for the Wimmera-Mallee System (Lake Bellfield, near Horsham); the Mornington Peninsula System (Devilbend Reservoir and Tarago Reservoir); private diverters near Benalla (Lake Nillahcootie); on the Buffalo River (first stage of Lake Buffalo); the Goulburn-Murray System (Lake Mokoan near Benalla, Corop Lakes); and irrigators in the King River Valley (Lake William Hovell on the King River).

At present work is proceeding on the Tandarra-Calivil Pondage north of Bendigo and the Rosslynne Reservoir near Gisborne.

Works expenditure of about \$4,000,000 per year is carried out from about twenty-six operating centres throughout the State. Two major construction centres are spending about \$2,500,000 annually on a programme of channel and drainage works in the Goulburn-Murray System, and the end of this programme is not yet in sight.

A major new development has been a grant of \$3,600,000 from the Commonwealth Government to finance a scheme to reduce the flow of saline drainage water into the River Murray. Works for the diversion of saline drainage at Kerang and Sunraysia were brought into operation.

About 390 miles of pipelines will replace earthen channels in the new \$2.5 million Millewa scheme situated west of Sunraysia.

Details of a projected storage on the Mitta Mitta River at Dartmouth in North-Eastern Victoria appear on page 839.

## Queensland

Particulars of the rainfall pattern of Queensland are given in Year Book No. 37, page 1122. (*See also* the chapter Physical Geography and Climate of this issue.)

### Administration

In Queensland the right to the use and flow of non-tidal surface water contained in, or flowing through or past, the land of two or more occupiers, and all artesian and sub-artesian water vests in the Crown. Subject to certain reservations for local authority and other purposes, such water is controlled by a Commissioner of Irrigation and Water Supply. Private diversions from watercourses, artesian wells and, in certain declared areas, sub-artesian wells, are subject to licence by the Commissioner. Dams and weirs are constructed by the Commissioner to safeguard supplies in streams from which private pumping for irrigation takes place, and also to provide water for irrigation areas established by the Commissioner. For a description of the development of the present administration *see* Year Book No. 42 and earlier issues.

### Irrigation—extent, systems and methods

Queensland sugar cane represents in value about 45 per cent of the agricultural production of the State. In 1970-71, 20 per cent of the sugar cane acreage was irrigated, representing 33 per cent of the total area irrigated in the State. Tobacco is another major crop, and the area irrigated during 1970-71 represented 96 per cent of the total plantings.

Most irrigation in Queensland is undertaken by farmers operating under licence to obtain water by pumping from streams or from natural underground storages. Over half the total area irrigated in Queensland is supplied from underground water. The main areas where these supplies have been developed extensively are the Burdekin Delta (Ayr-Home Hill area), the Pioneer Valley, Callide Valley (Monto area), Lower Burnett (Bundaberg area), Lockyer Valley, Darling Downs, and Redlands Bay.

Furrow irrigation is used for cotton, sugar cane, some tobacco, and miscellaneous row crops. Spray irrigation is used widely on fruit, vegetables, fodder crops, sugar cane, and the major part of the tobacco crop. Irrigation is required around-the-year for most of Queensland, as the timing and duration of the summer 'wet' season are too variable to enable a definite non-irrigation season to be fixed, as can be done in southern States.

**Irrigated culture**

The following table shows details of the area crops and pasture and the methods employed on land under irrigated culture during the 1970-71 season.

**AREA OF LAND UNDER IRRIGATED CULTURE: QUEENSLAND, 1970-71**

(Acres)

	<i>Method of irrigation</i>				<i>Total area</i>
	<i>Spray</i>	<i>Furrow</i>	<i>Flood</i>	<i>Multiple methods</i>	
<b>Crops—</b>					
Cereals . . . . .	35,021	41,431	14,293	894	91,639
Cotton . . . . .	894	7,414	815	..	9,123
Fruit . . . . .	9,905	341	218	938	11,402
Sugar cane . . . . .	56,650	75,952	13,152	9,937	155,691
Tobacco . . . . .	12,151	292	283	188	12,914
Vegetables . . . . .	40,575	4,129	462	517	45,683
Other crops(a) . . . . .	60,780	7,920	4,527	807	74,034
<b>Total crops . . . . .</b>	<b>215,976</b>	<b>137,479</b>	<b>33,750</b>	<b>13,281</b>	<b>400,486</b>
<b>Pastures . . . . .</b>	<b>42,736</b>	<b>660</b>	<b>16,298</b>	<b>740</b>	<b>60,434</b>

(a) Includes fodder crops.

**Areas under private irrigation**

In six important areas irrigation has been developed by private pumping. In the Lockyer Valley, thirty miles west of Brisbane, more than a third of an estimated total irrigable area of 60,000 acres is under irrigation. The valley comprises an extensive flood plain where heavy black alluvial soil thickly overlies gravels and sands carrying water suitable for irrigation, which is necessary for continuous agricultural production. A number of small weirs on Lockyer Creek with a total storage of 1,340 acre feet and Atkinson Dam, an off-stream storage with a capacity of 254,000 acre feet, have been constructed by the Irrigation and Water Supply Commission. The latter dam provides a regulated supply of water in Buaraba Creek and along the lower end of Lockyer Creek. The Lockyer Valley produces a substantial proportion of Queensland's onions, potatoes, pumpkins, lucerne, hay, green fodder, maize and dairy products.

The Darling Downs area west of Toowoomba is extensively irrigated from both surface and underground sources. Approximately 66,000 acres are under irrigation, of which 47,000 acres are supplied from underground sources and 6,000 acres are supplied from the sections of Sandy Creek and the Condamine River regulated by Leslie Dam (*see* page 855). Cereal, fodder, cotton and oil seed crops comprise a large proportion of the irrigated production in this region.

The Callide Valley in central Queensland is an important source of grain, dairy products, fodder, and cotton and is largely dependent on irrigation from underground water resources. Some 12,970 acres are now irrigated from underground supplies. The broad expanses of alluvium in the Pioneer Valley near Mackay have been extensively developed for cane production. The area under irrigation from groundwater and surface supplies in the vicinity of Mackay is some 15,470 acres. The lands in the vicinity of Bundaberg are cultivated for sugar cane production and over 47,300 acres are irrigated from surface and underground supplies.

The other important area is the fertile delta region of the Burdekin River, where the irrigated area is over 72,900 acres. The delta has ground water supplies at shallow depth, and these have been tapped to obtain supplies in the dry periods of the year. Sugar is the main crop irrigated. Schemes to replenish the subterranean water supplies in the Burdekin Delta by pumping from the Burdekin River are in operation under the control of the North and South Burdekin Water Boards.

**Government irrigation areas and projects**

The irrigation and Water Supply Commission has constructed and/or operates nine dams and forty-eight weirs with a storage capacity of 930,156 acre feet. Water from these storages supplies the following four irrigation areas operated by the Commission and regulates numerous streams from which pumping for private irrigation takes place.

*Mareeba-Dimbulah Irrigation Area.* In 1952 an irrigation undertaking was established to assist tobacco production in the valleys of the Walsh and Barron Rivers. Tinaroo Falls Dam on the Barron River (330,000 acre feet) was completed in 1958, and construction of irrigation works is continuing. Irrigation water from the dam is being supplied through 215 miles of channels to 563 farms in the area. Tinaroo Falls Dam is also providing a regulated flow of water in Barron River at Kuranda for the generation of hydro-electric power at Barron Falls.

*Burdekin River Irrigation Area.* The first stage of the Burdekin River Irrigation Area, comprising the Clare-Millaroo and Dalbeg sections, has been completed. Located from twenty-five to sixty-five miles from the mouth of the Burdekin, these areas comprise 18,862 acres and obtain water from central pumping stations drawing from the river. Eungella Dam on the Broken River with a capacity of 106,000 acre feet and two weirs on the Burdekin River upstream of the irrigation settlement with a capacity of 7,670 and 2,550 acre feet serve the areas. Eungella also provides cooling water for the Collinsville power station, water for Collinsville town and 4,000 acre feet per annum for mining development at Goonyella.

*Dawson Valley Irrigation Area.* A scheme for the development of the Dawson Valley providing for the irrigation of 70,000 acres was inaugurated in 1923, but work was discontinued after three weirs having a storage capacity of 10,280 acre feet had been built in this area. Recently, however, additional storage became essential to mitigate the effects of droughts in the developed area and Glebe Weir was recently completed on the Dawson River to provide a further 14,000 acre feet of storage. At present sixty-one farms (14,894 acres) are in production. Cotton and grain account for the major production from irrigated areas.

*St George Irrigation Area.* This area comprises twenty farms, on which some 9,069 acres were irrigated during 1970-71 from a weir on the Balonne River (8,220 acre feet), and from a further two recently constructed weirs with a combined capacity of 7,350 acre feet. These two weirs also form part of the new major supply system. Cotton, grain, fodder, wool and fat lambs are the main products. Construction is in progress on a major storage, the E. J. Beardmore Dam of 81,600 acre feet capacity, and irrigation and other works to serve a further sixteen farms and to regulate supplies along the Balonne River between the dam and its junction with the Colgoa River.

The following two irrigation areas are being developed with Commonwealth assistance.

*Emerald Irrigation Area.* Formal approval for the establishment of the Emerald Irrigation Area was given on 28 March 1968, following agreement by the Commonwealth Government to make a non-reimbursable grant of up to \$20 million available for the construction of the dam. The project involves the construction of Fairbairn Dam on the Nogo River with a capacity of 1,170,000 acre feet and the construction of irrigation, drainage, road and other works to serve some 130 irrigation farms on which up to 49,000 acres could be irrigated annually. Construction of Fairbairn Dam is nearing completion and storage of water has commenced.

*Bundaberg Irrigation Area.* This area was formally established on 5 November 1970, following agreement by the Commonwealth Government to provide a \$12.8 million non-reimbursable grant for construction of Monduran Dam and the Gin Gin Main Channel. The purpose of the scheme is to stabilise sugar cane production on the 1,600 farms in the area, which have suffered shortfalls in recent years owing to drought and consequent depletion of underground supplies. It is being constructed in two stages. Phase one of the first stage is now under construction and includes Monduran Dam, Gin Gin Channel and irrigation works to supply farms in four areas.

*Miscellaneous Irrigation Projects.* A combined bridge and weir on the Dawson River near Moura with a capacity of 5,100 acre feet was completed in 1946. The weir is the source of water supply for four farms aggregating some 21,000 acres, coal mining and urban development. Additional projects which have been completed since 1961 or for which construction work has commenced include the following: Moogerah Dam (Warrill Valley Project) on Reynolds Creek (75,000 acre feet) permits irrigation of some 7,000 acres of the Warrill Valley, and provides water for the thermal power station at Swanbank, near Ipswich. Boroumba Dam (Mary Valley Project) on Yabba Creek (34,500 acre feet) supplies the town of Gympie and will allow extension of the area irrigated from the Mary River to about 18,000 acres. Callide Dam (37,800 acre feet) on Callide Creek, nine miles upstream from Biloela, provides cooling water for the Calcap power station and compensation water for maintenance of underground supplies along Callide Creek. Leslie Dam (Upper Condamine Project), on Sandy Creek, has an initial capacity of 38,200 acre feet, with provision for later increase to 87,200 acre feet. Water from the dam is available for irrigation along the Condamine River as far as Cecil Plains and for a supply to the city of Warwick. Coolmunda Dam (Macintyre Brook Project) has a capacity of 61,000 acre feet, and provides irrigation water for up to 8,000 acres along Macintyre Brook. Wuruma Dam (Upper Burnett Project), on the Nogo River, has a storage capacity of 157,000 acre feet for irrigation of 11,000 acres along 100 miles of the Burnett River. In addition, the dam



will safeguard supplies of irrigation water to the Burdekin River Irrigation Area and private diverters along the Bowen and Lower Burdekin rivers. Bedford Weir (storage capacity 5,200 acre feet), situated on the Mackenzie River some 15 miles north of Blackwater provides an assured supply of water for mineral development and urban requirement in the Blackwater area. Atkinson Dam (capacity 25,400 acre feet), provides irrigation water to 3,100 acres on 131 holdings in the Lower Lockyer Valley. Construction is continuing on Maroon Dam (31,000 acre feet) on Burnett Creek, which will supply irrigation water along the Logan River. The development of rivers constituting portion of the Queensland-New South Wales border, under the authority of the Dumaresq-Barwon Border Rivers Commission, is described on page 845.

### Rural Water Supply Areas

Although provisions existed in the Water Acts for many years for the constitution of rural water supply Areas and Boards, little advantage was taken of these powers until 1964 when an amendment of the Acts extended the purposes for which these Areas and Boards may be constituted and the methods of rating and financing of works, and provided for resumption or acquisition of lands by such Boards. This form of water supply is being sought increasingly by groups of landholders in various parts of Queensland to provide a reasonably economical measure of permanent supply for stockwatering, dairy and domestic purposes in areas prone to drought, and thus achieve a permanent form of drought relief. Usually the capital cost of works is met by a 50 per cent subsidy by the Government and the balance by a Board borrowing by Government guaranteed loan on the security of debentures.

At 30 June 1971 thirteen Rural Water Supply Areas were operating, supplying 589 rural holdings covering 273,380 acres and reticulated by 326 miles of pipelines.

Water conservation, irrigation and drainage schemes may also be carried out under these Acts. One group irrigation scheme near Brookstead is now in operation and three group drainage schemes have been approved. Further group drainage schemes are currently under investigation.

### Underground water

For information on underground water resources in Queensland *see* Year Book No. 55 and earlier issues.

### Stock watering

A predominant interest in the field of water conservation has been the provision of stock and domestic water supplies in Queensland's great pastoral areas, which contain more than a third of the Commonwealth's cattle and about an eighth of the sheep. In addition to the stabilisation of water supplies in the pastoral areas, the provision of water along stock routes for travelling stock has received much attention in recent years.

At 30 June 1971, there were 882 facilities throughout the State and in addition, at that time, there were 11 facilities under construction and 3 under investigation.

Since 1935, the Queensland Irrigation and Water Supply Commission has acted as consultant and constructing authority to the Stock Routes Co-ordinating Board for watering facilities on stock routes. On completion, facilities are vested in local authorities for control and maintenance.

The two authorities mentioned above carry out a continuous investigation to ascertain general stock movements so that new facilities may be provided as required.

### Technical and financial assistance to farmers

*The Farm Water Supplies Assistance Acts*, 1958 to 1965 are designed to improve the standard of water supply installations on individual holdings, encourage greater development in individual irrigation schemes, provide greater stability of production, and avoid losses in time of drought as well as generally increase production. To achieve this purpose, the Acts authorise the provision of technical and financial assistance to landowners for the investigation, design and installation of approved works of farm water supply. All projects for which finance is provided under the Acts are carried out under Commission guidance, and for the payment of a small charge the Commission will advise on the construction of works designed by its staff, but for which the landowners do not require financial assistance under the Acts.

During 1970-71, 855 requests (700 for technical assistance only and 155 for technical and financial assistance) were received in addition to 507 applications for advice on ground-water supplies. An amount of \$886,069 was approved for advances and the amount actually advanced was \$881,918.



## South Australia

Brief particulars of the climatic conditions in South Australia are given on page 1129 of Year Book No. 37. (See also the chapter Physical Geography and Climate of this issue.)

### Administration

Water supplies, other than irrigation works, are under the control of the Engineering and Water Supply Department, which administers the Waterworks Act, 1932–1971 and Water Conservation Act, 1936–1969, both of which empower the Minister of Works to impound or divert the water from any lake, watercourse or underground source for the purpose of establishing and maintaining public water supply schemes. The Waterworks Act, 1932–1971 governs the principal reticulated water supplies in proclaimed water districts throughout the State. A feature of these supplies is the extensive network of water mains supplying country townships and farmlands where local water resources are practically non-existent.

Under the Water Conservation Act, 1936–1969, small dams, wells, bores, rainsheds, storages and, in some instances, minor reticulation works are provided in remote areas to assist local settlers in development and to supply travellers and travelling stock.

### Irrigation

Australian irrigation originated in the upper Murray in South Australia and the Mildura area of Victoria. South Australian irrigation commenced with an agreement between the Government and the Chaffey brothers in 1887 whereby an area of land at Renmark was made available for the establishment of certain irrigation works. In South Australia, irrigation is almost exclusively confined to the Murray Valley. Except for quantities held in various lock pools, no water from the Murray is stored in South Australia. Water is either pumped onto the land or gravitated from the river.

The two major authorities administering irrigation areas are the Department of Lands and the Renmark Irrigation Trust. The Trust is controlled by a local board of management consisting of seven members. This area differs from other South Australian irrigation areas in that the land is freehold instead of leasehold. Every settler is entitled to vote for the election of Trust members. The Trust maintains eighty miles of reticulation channels, which are being progressively replaced by underground pipelines financed by Trust revenue and State Government grants.

### Irrigated culture

The following table shows details of the area of crops and pasture and the methods employed on land under irrigated culture during the 1970–71 season.

AREA OF LAND UNDER IRRIGATED CULTURE: SOUTH AUSTRALIA, 1970-71  
(Acres)

	Method of irrigation				Total area
	Spray	Furrow	Flood	Multiple methods	
Crops—					
Orchards . . . . .	24,000	9,105	254	723	34,082
Vegetables—					
Potatoes . . . . .	6,668	26	10	64	6,768
Other . . . . .	7,452	1,483	55	190	9,180
Vineyards . . . . .	9,306	26,433	715	1,537	37,991
Other crops(a) . . . . .	35,490	49	12,396	209	48,144
<b>Total crops . . . . .</b>	<b>82,916</b>	<b>37,096</b>	<b>13,430</b>	<b>2,723</b>	<b>136,165</b>
Pastures . . . . .	15,069	..	35,299	125	50,493

(a) Includes fodder crops.

### Water supply schemes

*Adelaide Metropolitan Water Supply.* Adelaide and surrounding areas of development including Elizabeth derive their water from nine reservoirs in the nearby Mount Lofty Ranges and by means of pumping stations and a pipeline from the Murray River at Mannum. The reservoirs have a storage capacity of 153,000 acre feet and the pipeline has a nominal capacity of 95,500 acre feet a year.

A second pipeline extending from Murray Bridge to convey River Murray water to the metropolitan supply system is under construction. This pipeline will initially have a capacity of 132,200 acre feet per year. The consumption for the whole area for the year 1970-71 was 123,000 acre feet. The capital cost to 30 June 1971 was \$142,070,000.

*Country reticulated supplies.* Areas extending to a distance of 90 miles north of Adelaide are supplied from the Warren, Barossa and South Para Reservoirs (50,470 acre feet) in the Barossa Ranges. Supplies to these areas are supplemented by River Murray water delivered into the Warren trunk main by a pipeline extending from Swan Reach to a point near Stockwell. This pipeline has a nominal capacity of 20,200 acre feet per year. Agricultural towns and areas further north are supplied from Beetaloo, Bundaleer and Baroota Reservoirs, and the Morgan-Whyalla Pipeline. The original 223-mile pipeline from Morgan to Whyalla and a second and larger pipeline completed in 1966 are at present able to carry 53,300 acre feet of water a year from the River Murray. A large part of Eyre Peninsula is supplied, through the 240-mile Tod River Main and the 104-mile East Coast Main, with water from the Tod River Reservoir (9,196 acre feet), the sand beds of the Uley-Wanilla Basin, the Lincoln Basin, and Poldas Basin. Along the Murray River all towns are supplied from the river. Water from the river is also reticulated through adjacent farmlands for up to 30 miles, and a pipeline extended from Tailem Bend to Keith provides the means of reticulating Murray water to numerous towns and a large area of farmlands in the upper south-east. Surface and underground resources have been developed to supply most rural centres not covered by the larger schemes. Water conservation and distribution works in country districts to 30 June 1971 have cost \$156,722,000 (exclusive of river control and irrigation works on the Murray River) and contain 8,319 miles of water mains.

### Underground water

For information on underground water resources in South Australia *see* Year Book No. 55 and earlier issues.

### Farm water schemes

The Department of Mines gives assistance to individual farmers in the provision of supplies from underground sources, and the Department of Agriculture provides an advisory service on water conservation and irrigation designs on farms, and on the suitability of underground water for irrigation and stock purposes. In addition, a great part of the farming areas is supplied by the Engineering and Water Supply Department with water under pressure from the extensive distributions systems connected to various reservoirs and the Murray River.

### South-eastern drainage

In the south-east of South Australia it has been necessary to construct drainage schemes to dispose of surplus water from areas where a series of valleys or flats is separated by low ranges, parallel to the coastline, which prevent natural drainage. The Millicent Drainage System, completed in 1885, reclaimed 100,000 acres. The South-eastern Drainage Area System, which is controlled by the South-eastern Drainage Board, comprises drains constructed by the State Government at public expense, plus those undertaken by the Government in co-operation with the landholders. The area is bounded on the east by the State boundary, and on the west by the sea coast. It extends from about 55 miles north of Kingston, southerly to near Millicent and Kalangadoo. Up to 1948 about 430 miles of drains had been provided at a cost of \$1,441,752. These were of a developmental nature intended more to promote the rapid removal of floodwaters than to provide a complete system of drainage. Since 1948 the complete drainage of the Biscuit, Reedy Creek and Avenue Flats in the Western Division has been carried out. The southern section of 260,000 acres involved the excavation of 8,100,000 cubic yards in providing 343 miles of new or enlarged drains, whilst the northern area of 140,000 acres required the excavation of 3,051,500 cubic yards in the construction of 99 miles of drain.

The drainage of 727,000 acres in the Eastern Division of the South-east, situated east of Bakers Range and extending from near Kalangadoo to north of Naracoorte, was commenced, in 1960 and completed in 1970. The work required the construction of a main diversion drain (consisting of the enlargement of 24 miles of existing drain and the construction of 22 miles of new drain) from the sea at Beachport to the Naracoorte-Mount Gambier railway line near Struan. The provision of new branch drains and the enlargement and extension of existing branch drains completed the approved works. A total excavation of 7,300,000 cubic yards over a length of 117.5 miles of new or enlarged drains was involved.

The capital cost of drainage in the South Eastern Drainage Area System to 30 June 1971 was \$18 million, and the length of drains constructed was 875 miles. An extensive system of private drains (many of which discharge into drains constructed under Government authority) also exists in the South-east of the State.

### Murray River Irrigation Areas

Where irrigation water in excess of plant requirements has been applied, perched water tables develop. Rising to the level of tree roots, these cause death of orchards from salination and water-logging. Most orchards and vineyards are now drained by plastic and tile drainage systems, thus restoring their health and productivity. Disposal of the drainage water is by pumping to basins on river flats where it evaporates, or by discharge into underlying sand and limestone aquifers. The usefulness of the latter strata is declining as they are becoming fully charged with water.

## Western Australia

Brief particulars of the climatic conditions in Western Australia are given on page 1133 of Year Book No. 37. (See also the chapter Physical Geography and Climate of this issue.)

### Administration

The Minister for Water Supply, Sewerage and Drainage administers the departmental irrigation schemes under the *Rights in Water and Irrigation Act, 1914-1971*. He is advised by an Irrigation Commission representing the local irrigationists and governmental, technical and financial branches. He also administers, under the *Country Areas Water Supply Act, 1947-1964*, the water supplies to certain country towns and reticulated farmland. As Minister for Works he controls minor non-revenue producing supplies to stock routes and a few mines and agricultural areas with their associated communities. A small number of town supplies are administered by local boards under the *Water Boards Act, 1904-1969*, which provides a large degree of autonomy with ultimate Ministerial control.

### Irrigation

Irrigation schemes have been established by the Government on the coastal plain south of Perth in the Waroona, Harvey and Collie River Irrigation Districts between Waroona and Dardanup, the water being channelled from dams in the adjacent Darling Range.

Logue Brook Dam with a capacity of 19,717 acre feet, Harvey Weir (7,194 acre feet) and Stirling Dam (46,191 acre feet) supply the Harvey Irrigation District, the rated area of which is 13,610 acres. The Harvey District links up with the Waroona Irrigation District, which is served by Waroona Dam (12,105 acre feet), Drakes Brook Dam (1,855 acre feet) and Samson Brook Dam (7,437 acre feet) and comprises a rated area of 3,060 acres. Wellington Dam on the Collie River with a capacity of 150,107 acre feet serves an area of 10,870 rated acres in the Collie River Irrigation District. Pastures for cattle comprise 89 per cent of water usage in these districts.

The recently completed Glen Mervyn Dam (1,209 acre feet) stores water for regulated release down the Preston River for irrigation of orchards and crops when the natural summer stream flow is insufficient to meet the demand.

Since the mid 1930's, a centre of tropical agriculture has been developed at Carnarvon, near the mouth of the Gascoyne River. Private pumping from sands of the Gascoyne River is the principal source of irrigation water for the 158 plantations. Because of the high risk of drawing in surrounding saline ground waters by over-pumping, the usage of water by the planters is controlled strictly by the Government. The Government is developing up-river sources and delivers water by pipeline to 43 plantations in the district. Bananas for the Perth market and fruit and vegetables for the Perth and Adelaide markets are the principal crops. A tropical research station is maintained at Carnarvon by the Department of Agriculture.

A project has been embarked upon to provide water supplies for irrigation in the area traversed by the Ord River in the Kimberley Division. The project provides for the eventual development of an area of 178,000 acres of land agriculturally and topographically suitable for irrigation.

The first stage, in which water was supplied to 30 farms averaging 660 acres plus a 2,400 acre pilot farm from the Bandicoot Bar Dam with a capacity of 80,000 acre feet, was completed in 1965. Cotton has been the principal crop but considerable interest is now being shown in grain sorghum. Construction of the Ord Dam commenced in 1969 and on completion will store 4.6 million acre feet of water to serve a further area of 148,000 acres, approximately one third of which is located in the Northern Territory.

On the Liveringa flood plain, water is diverted from the Fitzroy River into a dam on Uralla Creek, which together with a natural storage of about 1,200 acre feet, provides for irrigation at Camballin 65 miles south-east of Derby. Grain and fodder sorghums are grown in the area.



**Irrigated culture**

The following table shows details of the area of crops and pasture and the methods employed on land under irrigated culture during the 1970-71 season.

**AREA OF LAND UNDER IRRIGATED CULTURE: WESTERN AUSTRALIA, 1970-71**  
(Acres)

	Method of irrigation			Total area
	Spray	Flood and furrow	Multiple methods	
Crops—				
Cotton . . . . .	..	8,505	..	8,505
Orchards . . . . .	10,965	1,219	1,493	13,677
Vegetables—				
Potatoes . . . . .	4,715	58	93	4,866
Other . . . . .	3,761	1,791	140	5,692
Vineyards . . . . .	779	331	47	1,157
Other crops(a) . . . . .	1,529	5,436	13	6,978
<b>Total crops . . . . .</b>	<b>21,749</b>	<b>17,340</b>	<b>1,786</b>	<b>40,875</b>
Pastures . . . . .	4,698	32,001	574	37,273

(a) Includes fodder crops.

**Country water supplies controlled by Department of Public Works and Water Supply**

Since 1947 enlargement and extensions of the Goldfields and Agricultural Water Supply and the development of the Great Southern Towns Water Supply have been carried out, mainly in accordance with a project known as the Modified Comprehensive Scheme. Under this scheme water has been supplied to towns and farms in an area of five million acres in mixed farming (cereal and sheep) districts of Western Australia. The modified scheme was completed in 1961 at a cost of \$20.6 million, of which the Commonwealth contributed \$10 million under the *Western Australia Grant (Water Supply) Act 1948*. A further request was made by the State Government in 1963 for a grant of \$10.5 million representing half the estimated cost of proposed extensions which would increase by 3.7 million acres the area served by the scheme. The Commonwealth agreed to provide assistance in the form of an interest-bearing loan up to a maximum of the amount requested, advances to be made during a period of eight years commencing 1965-66. Legislative authority for the loan is given by the *Western Australia (South-west Region Water Supplies) Agreement Act 1965*.

Mundaring Reservoir on the Helena River, 26 miles from Perth, is the source of water supplied to the Eastern Goldfields. It has a capacity of 62,435 acre feet and is connected to Kalgoorlie by a pipeline with extensions to towns and agricultural areas. At 30 June 1971 the Goldfields and Agricultural Water Supply was serving 112 towns and localities, and water was being reticulated to farms in an area of 5.8 million acres. The total length of pipelines was 4,538 miles and the number of services was 25,946. Consumption during 1970-71, including supplies drawn from local schemes and from the Metropolitan Water Supply, was 3,693 million gallons.

The Great Southern Towns Water Supply pipes water from Wellington Dam to towns on the Great Southern Railway from Brookton to Katanning as well as a number of other towns. At 30 June 1971 the Supply was serving 29 towns, the total length of pipelines was 774 miles, and the number of services was 10,006. Consumption during 1970-71, including supplies drawn from local sources, was 841 million gallons.

One hundred and twenty-five local schemes supply water from stream flow, dams, tanks, wells, and bores, mainly to country towns. At 30 June 1971 the total length of water mains was 1,125 miles and the number of services was 32,642.

**Other country water supplies**

As well as the schemes controlled by the Department of Public Works and Water Supply, there are four local Water Boards which draw supplies from stream flow, dams, wells, and bores. In addition, some local authorities supply water within their boundaries. The Forests Department, sawmilling companies, and mining companies operate schemes to supply water to their towns and



operations. Railways of the Commonwealth and State Governments make independent provision for supplies of water for their own purposes, although considerable additional quantities are consumed by the railways from other sources, such as those controlled by the Department of Public Works and Water Supply and the Metropolitan Water Supply, Sewerage and Drainage Board.

### Underground water

For information on underground water resources in Western Australia *see* Year Book No. 55 and earlier issues.

## Tasmania

Brief particulars of the rainfall pattern in Tasmania are given on page 1136 of Year Book No. 37. (*See also* the chapter Physical Geography and Climate of this issue.)

### Main purposes of water conservation and utilisation

Because of the generally more adequate rainfall in Tasmania, scarcity of water is not such a problem as it is in most mainland areas, though not all streams are permanently flowing. The only large scale conservation by reservoirs is for hydro-electric power generation, but there are some moderately sized dams built by mining and industrial interests and by municipal authorities for town water supplies. 'Run of the river' schemes are quite adequate for assured supply in many municipalities. The main supply for Hobart and adjacent municipalities originates from a 'run of the river' scheme based on the Derwent River. The river is controlled in its upper reaches by eight dams, built for hydro-electric power generation, and these tend to stabilise river flow.

Until a few years ago irrigated areas were negligible except for long established hop fields, but there is a rapidly expanding use of spray irrigation on orchards, pastures, potatoes, and beans. Until recent years there has been almost complete dependence on natural stream flows, but the need for some regulating storages has become apparent. Increasingly, farmers are constructing storages of their own, and the extension of this practice is foreseen as the logical solution in most areas, as valleys are narrow and steep sided. Single large reservoirs cannot economically serve large areas of suitable land, as nearly every valley is separated from others by pronounced hills, prohibiting the construction of cross-country channels.

Underground water suitable for stock, minor irrigation works and domestic use is exploited in the consolidated rocks of southern, midlands and north-western Tasmania. In the south and midlands nearly all groundwater is obtained from Permian and Triassic rocks. In the north-west, water is recovered from a variety of rocks ranging from Precambrian dolomites, quartzites and schists to Tertiary basalts and Quaternary sands. The highest yields are obtained from the dolomites and the basalts. In the central north and north-east unconsolidated Tertiary clays and gravels yield water of variable quality, and in some coastal areas, notably King and Flinders Islands, water is obtained from Aeolian sands.

The Mines Department is charged with the investigation of underground water resources and is currently drilling in the Longford (central north) and Scottsdale-Bridport (north-east) Tertiary areas, and is also examining the prospects of coastal sand supplies on the East Coast. There is a great reserve of untapped permanent streams in the western half of the State, which is largely unsettled. The State's largest rivers discharge in the west, but diversion to the eastern half of the watersheds is not regarded as practicable.

### Administration

In Tasmania, water supply was once exclusively the responsibility of local government authorities, but two statutory authorities, the Metropolitan Water Board and the Rivers and Water Supply Commission, now operate bulk supply schemes, piping water for distribution by the local government authorities in the Hobart and Launceston regions, and directly to certain industrial consumers.

*Metropolitan Water Board.* The overall control of the supply of water to the cities of Hobart and Glenorchy and the municipalities of Kingborough and Clarence is vested in the Metropolitan Water Board, the local government authorities retaining primary responsibility for reticulation and sales to consumers. Water is also supplied by the Board to urban areas in the Sorell, New Norfolk and Brighton municipalities. The major source of water is the River Derwent at Lawitta, where two pumping stations are installed. The Metropolitan Water Board controls two schemes, the West Derwent Water Supply and the Southern Regional Water Supply. The first was originally constructed

to serve Hobart, Glenorchy, Kingborough and Clarence; the second constructed by the Rivers and Water Supply Commission, but now under the control of the Board, serves that portion of Greater Hobart situated on the eastern shore of the River Derwent. The responsibility for raising loans and debts servicing necessary to meet the capital cost of constructing and adding to the schemes rests with the Metropolitan Water Board.

*Rivers and Water Supply Commission.* The Commission is empowered by the *Water Act 1957* to take water at streams and lakes, or to issue others with licences to do so; licensing covers supply to specific industries and municipalities as well as irrigation. The Commission is concerned with drainage trusts' operations, river improvements (including repairs after flood damage), stream gauging, its own regional water schemes, and with water supply, sewerage and drainage of towns. It operates in a similar manner to the Metropolitan Water Board in controlling the water schemes serving the East Tamar region (North Esk Regional Water Supply), the West Tamar area (West Tamar Water Supply) and the Prosser River Scheme which supplies water to a sodium alginate industry at Louisville near Orford and supplements the water supply of the township of Orford. The North Esk Regional Water Supply was constructed to meet industrial requirements of the aluminium refinery and other industries at Bell Bay and to provide bulk supplies to surrounding municipalities on the eastern bank of the River Tamar. The West Tamar Water Supply was constructed primarily to meet domestic requirements of urban areas in the Beaconsfield municipality. The local government authorities retain primary responsibility for reticulation and sale to consumers, except to certain industrial users.

In municipalities not serviced by the Metropolitan Water Board or the Rivers and Water Supply Commission, the supply of water is a function of the local municipal council. Where the construction of water and sewerage schemes is beyond the financial capacity of a local government authority, or if it requires assistance to pay for water supplied from regional schemes, the Commission may make recommendations to the Minister for payment of a subsidy.

#### Industrial water schemes

Four principal industrial water schemes have been installed privately—for a paper mill near Lawitta on the Derwent River, for a paper mill at Burnie using water from the Emu River, for another at Wesley Vale using water from the Mersey River, and for a factory at Heybridge reticulating water from Chasm Creek. The State Government has constructed some water schemes for use primarily for industrial purposes. These include the scheme serving the aluminium refinery at Bell Bay referred to above, a storage supplementing the summer flows of the Kermadec River for use by a wood-pulping plant at Geeveston, and the Prosser River Scheme referred to above.

#### Irrigation

There are no State irrigation projects at present, but the Rivers and Water Supply Commission is investigating the possibility of establishing several schemes, notably in the Huon region, the Winnaleah area, and the valleys of the Jordan, Coal and Meander rivers. The first stage of the Cressy-Longford Irrigation Scheme which involves the diversion of water from the tailrace of the Poatina Hydro-Electric power station has been tested. The main channel and west channel are complete and work on the east channel is expected to commence shortly. A total of some 60 miles of earthen channels will be constructed which will irrigate an area of approximately 20,000 acres. At least half of this area will be served by gravity. The scheme will also provide an augmented flow to two rivers which will increase the amount of water available for irrigation by downstream landowners. It is estimated that under maximum development at least 6,000 acre feet of water annually would be available to farmers connected to the scheme both inside and outside the irrigation district. With the exception of the privately owned Lawrenny estate at Ouse, which is the largest single area under irrigation in the State, there are no extensive schemes utilising one common source of water supply in Tasmania. The larger portion of the area under irrigation is watered by private schemes pumping water from natural streams.

**Irrigated culture**

The following table shows details of the area of crops and pasture and the methods employed on land under irrigated culture during the 1970-71 season.

**AREA OF LAND UNDER IRRIGATED CULTURE: TASMANIA, 1970-71**  
(Acres)

	<i>Method of irrigation</i>				<i>Total area</i>
	<i>Spray</i>	<i>Furrow</i>	<i>Flood</i>	<i>Multiple methods</i>	
Crops—					
Fruit . . . . .	4,290	107	248	332	4,977
Vegetables—					
Potatoes . . . . .	4,698	16	..	1	4,715
Other . . . . .	6,182	8	56	47	6,293
Other crops(a) . . . . .	5,478	705	862	111	7,156
<b>Total crops . . . . .</b>	<b>20,648</b>	<b>836</b>	<b>1,166</b>	<b>491</b>	<b>23,141</b>
Pastures . . . . .	12,197	1,482	7,478	1,433	22,590

(a) Includes fodder crops.

**Northern Territory**

Some particulars of the climate and main topographical features of the Northern Territory are given on page 1138 of Year Book No. 37, and in this issue information on climatic conditions will be found in the chapter Physical Geography and Climate, and a brief outline of contour and physical characteristics in Chapter 28, The Territories of Australia.

**Administration**

Under the *Control of Waters Ordinance* 1938-1971 of the Northern Territory, natural waters are vested in the Crown. Where a watercourse or lake forms a boundary of any land alienated by the Crown, the beds and banks are deemed to remain the property of the Crown (except in special cases) and the diversion of water is prohibited except under prescribed conditions. The Ordinance requires that drilling for ground-water be carried out only by drillers who are registered under the Ordinance. Registered drillers are required to provide the Government with information on bores drilled including the location, depth and size of bore, strata encountered and water produced. In particular areas where stricter control is necessary the construction or use of a well or water bore without a permit can be prohibited.

Under the *Water Supplies Development Ordinance* 1960-1971 any landholder engaged in pastoral or agricultural production may seek information or advice from the Commissioner of Water Development who is appointed under the Ordinance. He may also apply for an advance towards the cost of work proposed to be carried out. The Ordinance also provides for a refund to the landholder of the cost of drilling an unsuccessful bore where the landholder had applied to the Commissioner for advice on its construction and has carried out all drilling operations in accordance with advice given.

There is a Water Resources Branch of the Northern Territory Administration under the control of a Director. The Branch carries out systematic stream gauging, collection of data on surface and underground water supplies, planning of water use for irrigation and town water supplies and flood prevention and control. It also provides a general advisory service to the public on water resources and water conservation by providing information on the geology of the country, the prospects of obtaining ground-water, the possible location of bore sites, the method of drilling and equipping bores, information on stream flows, surveys of dam sites, the design of water supply schemes and reticulation layouts and on the chemical and bacteriological quality of water supplies.

**Underground water**

For information on underground water resources in the Northern Territory see Year Book No. 55 and earlier issues.



At 30 June 1971, 7,457 bores and wells were registered in the Northern Territory. Of these 4,459 were for pastoral use, 395 for agricultural use, 615 served town domestic water supplies, 113 were in use on mining fields, 828 were investigation bores, 423 were Government established stock route bores and 518 were classified under other uses. These include successful bores which have collapsed and bores which were unsuccessful owing to drilling difficulties, or to insufficient quantity or poor quality of underground water.

### Irrigation

There are no large water conservation projects in the Territory with the exception of the Manton Dam (12,700 acre feet), which serves Darwin with a reticulated supply. Some water is drawn from the rising main between the Manton Dam and Darwin for irrigation purposes, but the trend is for properties in this area to develop their own water supplies, either by boring or by pumping from watercourses or lakes. Additional water will be supplied to Darwin by the Darwin River Dam which commenced filling late in 1971. Groundwater is being pumped from McMinns Lagoon area to augment the supply.

The hydrological investigations required in the Northern Territory as part of the National Water Resources Assessment Programme are being carried out by the Water Resources Branch. The enlargement of the network of base gauging stations built and operated for this purpose has ceased for the present owing to lack of staff. In particular areas of development where water supply or irrigation proposals require surface water data, supplementary gauging stations are built to obtain this information. At 30 June 1971, the Northern Territory stream-gauging network comprised 266 operating stations; of these, 168 were base stations for measuring stream flow and 98 were supplementary stations.

Agricultural activity in the Territory is not extensive, being confined to the Darwin, Adelaide River, Coomalie Creek, Daly River, Katherine River, Wickham River, Douglas River, Edith River and Alice Springs area, with only small acreages being utilised. In the Territory 78 licences to divert water from streams were current at 30 June 1971. The total licensed area for irrigation is 4,000 acres, but the actual area irrigated is less than this. There are also a number of farms irrigated from bore supplies, particularly in the Alice Springs area. Purposes for which irrigation water is used include the growing of fruit, vegetables, crops and pastures, and also dairying and mixed farming.

Both the Daly and Adelaide Rivers appear to offer considerable potential for irrigation development with regulation of the rivers. Extensive investigations are being conducted into possible dam sites and areas of land suitable for irrigation in the region but further work is needed. Irrigation trials are in progress using water from the high-production bores in the Daly Basin. Further exploratory drilling in this area is being carried out.

Investigations are continuing into areas of the Northern Territory which may be suitable for irrigation from the main storage on the Ord River in Western Australia.

## Papua and New Guinea

Rainfall in Papua and New Guinea varies considerably from approximately 240 inches near Linden-hafen (New Britain) and 230 inches at Kikori (Papua) to about 70 inches near Marienburg (New Guinea) and 40 inches at Port Moresby (Papua). For a general description of these territories *see* Chapter 28, The Territories of Australia of this Year Book. Irrigation has not been developed on any organised basis owing to the availability of high rainfall and the nature of agricultural development.

The Territory of Papua and New Guinea is well served with large rivers deriving their water from heavy tropical rains and high mountains which rise to over 14,000 feet, but complete data regarding water resources are not available. During 1970-71 the Commonwealth Government continued to implement the policy of establishing a national network of stream-gauging stations which can be used in assessing the water resources of the Territory, while continuing to collect hydrological data for specified proposed hydro-electric projects.

The largest rivers in the Territory include the Fly (700 miles long, situated in the Western division of Papua), the Sepik (700 miles), the Ramu (450 miles), the Purari (300 miles), and the Markham (110 miles). The main water conservation interest in New Guinea at present is the hydro-electric potential, which is extensive. An outline of schemes at present in operation is given in Chapter 28 The Territories of Australia.



## CHAPTER 24

### FORESTRY

For further details on subjects dealt with in this chapter see the annual bulletins *Non-Rural Primary Industries* (10.23) and (for sawmills, etc. operations) *Manufacturing Establishments and Electricity and Gas Establishments* (12.23) and *Forests and Forest Products* (10.47).

#### Source of statistics

Statistics relating to forestry are, in general, provided by the various authorities concerned with forestry administration. Particulars of forestry activities contained in this chapter have been collected by the Statisticians of the various States, mainly from information provided by the States forestry authorities. Other information on forested areas has been provided by the Commonwealth Forestry and Timber Bureau. Statistics of timber and by-products have been compiled from the annual factory collections undertaken by the Statisticians in the several States. Figures of production of gums, resins and tanning barks have been provided by the State forestry authorities. Data of imports and exports of forest products and timber and timber products have been compiled in the Commonwealth Bureau of Census and Statistics as part of the statistics of overseas trade. The figures shown relate, in general, to years ended 30 June.

#### Forestry in Australia

##### Objects of forestry

The main object of forestry authorities is to manage the forests of the country in a manner that will provide the maximum benefits, both direct and indirect. Direct benefits include the provision of essential commercial commodities such as structural timber, pulpwood, plywood, veneers, firewood, bark products, tars, oil, and resins. Indirect benefits include protection of soil and stock from wind and exposure, regulation of stream flow, provision of recreational facilities, and aesthetic effects. Forestry also aims at improving existing forests and woodlands by properly controlled harvesting, by protection from such destructive agencies as fire and insect attack, and by inducing regeneration. The provision of a partial tree cover on denuded lands where this cover is necessary for protective purposes, and a complete cover when the land is better under forest than under any other land use, are further aims of forestry.

##### General account of forests and timbers

The area of land in Australia suitable for the production of commercial timber as a primary crop is very small in comparison with the size of the continent. Broadleaved forests (hardwoods) cover 76 per cent of the total forested area, and approximately 95 per cent of the broadleaved forest area is occupied by eucalypts.

*Eucalypts.* The genus *Eucalyptus* is remarkable in that it includes some 500 known species, ranging in size from the mighty forest giants, mountain ash (*E. regnans*) of Victoria and Tasmania, and karri (*E. diversicolor*) of Western Australia, down to the small mallee species which inhabit vast areas of the inland. The habitats range from the inland plains to the high mountain areas in the Australian Alps, and from areas with the annual rainfall as low as 10 inches to those where it is 150 inches. Of the 500 species, only about 100 are used for sawmilling, and not more than 40 of these are exploited extensively.

The better class of eucalypt forest is concentrated mainly in the higher rainfall areas such as the east coast, the highlands of southern New South Wales, Victoria and Tasmania, and the south-western corner of Western Australia. The more important species include blackbutt (*E. pilularis*), tallowwood (*E. microcorys*), flooded gum (*E. grandis*), and red mahogany (*E. resinifera*) of New South Wales and Queensland; alpine ash (*E. delegatensis*) of New South Wales, Victoria and Tasmania; mountain ash (*E. regnans*), messmate (*E. obliqua*) and blue gum (*E. bicostata*) of Victoria and Tasmania; and karri (*E. diversicolor*) of Western Australia. For height and grandeur, mountain ash and karri are unequalled among the broadleaved trees of the world and are excelled only by a few North American coniferous (softwood) species.

In the coastal regions with lower rainfall the eucalypt forests contain many durable species such as the ironbarks, grey gums and bloodwoods of the east coast, and jarrah (*E. marginata*) and tuart (*E. gomphocephala*) of Western Australia. The spotted gum (*E. maculata*) occurring in New South Wales and Queensland is another example.

Along most of the inland streams and adjacent flood-plains there are riverain forests consisting mainly of river red gum (*E. camaldulensis*), a very durable tree which has supplied large quantities of sawn timber, railway sleepers and fence posts.

Eucalypts also occur in open forest and savannah woodland formations in areas receiving a reliable rainfall of about 10 to 20 inches per annum, as on the goldfields of Western Australia where salmon gum (*E. salomonophloia*), brown mallet (*E. astringens*) and wandoo (*E. wandoo*) occur. These trees are of considerable value for firewood, as mining timbers and for fencing. Minor forest products such as sandalwood, tan bark, essential oils, etc., also come from isolated areas in this type of country, and in the more arid areas.

*Other broadleaved timbers (hardwoods).* Broadleaved genera other than *Eucalyptus* cover a comparatively small portion of the forested land in Australia; however, the areas concerned provide a great variety of timbers suitable for a multitude of uses. There are two basic types of forest containing supplies of broadleaved timbers other than eucalypts, namely, the tropical and sub-tropical rainforests of coastal Queensland and New South Wales and the temperate rainforests of southern Victoria and Tasmania, both of which yield species known collectively as rainforest or brushwood species.

The tropical and sub-tropical rainforest along the eastern coast of Australia contains a large number of different species. Tropical rainforest occurs in northern Queensland in the vicinity of Cairns and on the Atherton Tableland, providing such well-known cabinet woods as Queensland maple (*Flindersia brayleyana*), Queensland walnut (*Endiandra palmerstonii*) and the silky oaks. The sub-tropical rainforest found in southern Queensland and northern New South Wales yields the tulip oak, crab apple (*Shizomeria ovata*) and white beech (*Gmelina leichhardtii*). Coachwood (*Ceratopetalum apetalum*) and sassafras (*Doryphora sassafras*) occur in regions to the south near Dorrigo and have yielded valuable timber for many years.

Temperate rainforest which is to be seen in southern parts of Victoria and western Tasmania consists mainly of myrtle beech (*Nothofagus cunninghamii*), but produces also southern sassafras (*Atherosperma moschata*) and blackwood (*Acacia melanoxylon*).

Turpentine (*Syncarpia glomulifera*), an excellent harbour pile timber resistant to marine borer attack, and brush box (*Tristania conferta*), a superior structural and decking timber, are found in association with some eucalypts in the wetter rainfall areas on the north coast of New South Wales and in southern Queensland.

*Conifers (Softwoods).* One of the most important species of native conifers is white cypress pine (*Callitris columellaris*). The main cypress pine forests of commercial value occur in New South Wales and southern Queensland west of the Great Dividing Range. The trees are comparatively small, but the timber has particular value owing to its durability including resistance to termites. It is suitable for use as scantlings, flooring, linings, weatherboards, poles, and posts. As much of the area originally covered by cypress pine has been cleared for wheat farming and grazing, the production from the remaining State forests is now strictly regulated to ensure a continuous supply.

Another important native conifer is hoop pine (*Araucaria cunninghamii*), which occurs naturally in the sub-tropical rainforest of southern Queensland and northern New South Wales associated with tulip oak, crab apple, white beech, coachwood, and sassafras. The greater part of the original hoop pine forests has been exploited, but considerable areas have been replanted to this species in Queensland and, to a lesser extent, in New South Wales.

Other native conifers which have played a useful but minor part in the Australian timber industry include bunya and kauri pines (*Araucaria bidwillii* and *Agathis palmerstonii*) of Queensland, and celery-top, Huon and King William pines (*Phyllocladus asplenifolius*, *Dacrydium franklinii* and *Athrotaxis selaginoides*) of Tasmania. Kauri pine is found in the tropical rainforest of northern Queensland in association with non-eucalypt broadleaved trees, while bunya pine occurs in the sub-tropical rainforests. In the temperate rainforests of Tasmania celery-top, Huon and King William pines are found in association with myrtle beech, southern sassafras and blackwood.

#### Extent of forested areas

Estimates prepared for the Food and Agriculture Organisation World Forest Inventory 1970, show the total area of forests plus other wooded areas as 340.4 million acres in 1970. This represents a smaller figure than the previously published result of a similar survey taken in 1965 for the Food and Agriculture Organisation which showed the total area of forests and woodlands as 599.7 million acres. The difference is largely explained by the fact that the definition of 'woodland' was changed considerably between the two reference dates.

## CLASSIFICATION OF FOREST AREA(a): AUSTRALIA

(Source: Forestry and Timber Bureau)

('000 acres)

<i>Types of forest</i>	<i>rea</i>
<b>FORESTS AND OTHER WOODED AREAS</b>	
Forests under exploitation . . . . .	65,269
Forests not under exploitation(b)—	
Excluded from exploitation by law . . . . .	4,978
Other . . . . .	23,498
<i>Total forests</i> . . . . .	93,745
Other wooded areas(c) . . . . .	246,625
<i>Total forests and other wooded areas</i> . . . . .	340,370
<b>OWNERSHIP OF FORESTS</b>	
Publicly-owned forests—	
State forests . . . . .	41,355
Other forests . . . . .	30,270
<i>Total publicly-owned forests</i> . . . . .	71,625
Privately-owned forests . . . . .	19,412
Ownership not yet determined . . . . .	2,708
<i>Total forests</i> . . . . .	93,745

(a) Date of inventory 31 March 1970. (b) Areas of lowgrowing mallee and similar associations of woody vegetation are not included. (c) Includes woodlands, scrublands, etc., not regarded as forests.

## Forest reserves

The distribution of forest reserves is shown by States and Territories in the following table. Detailed comparisons between States are not possible because of the lack of uniform definitions.

## FOREST RESERVES: STATES AND TERRITORIES, 31 MARCH 1971

(Source: Forestry and Timber Bureau)

('000 acres)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.(a)</i>	<i>A.C.T.</i>	<i>Aust.</i>
Production reserves(b)—									
Productive . . . . .	5,750	4,190	9,332	220	4,076	3,035	2	31	26,636
Unproductive . . . . .	718	1,351	..	28	..	1,168	73	..	3,338
Unstocked . . . . .	695	116	..	..	708	467	1	..	1,987
<i>Total production reserves</i>	7,163	5,657	9,332	248	4,784	4,670	76	31	31,961
Protection reserves(c)—									
Productive . . . . .	..	..	..	3	33	425	..	13	474
Unproductive . . . . .	30	514	2,471	45	93	..	1,200	97	4,450
Unstocked . . . . .	..	..	..	..	28	..	314	..	342
<i>Total protection reserves</i>	30	514	2,471	48	154	425	1,514	110	5,266
All other reserves, productive, unproductive and unstocked(d)	1,029	151	..	..	..	..	..	..	1,180
<i>Total area all reserves</i>	8,222	6,322	11,803	296	4,938	5,095	1,590	141	38,407

(a) At 31 March 1970. (b) Land permanently dedicated to timber production. In the case of the A.C.T. these are 'Managed forests'. (c) Includes flora and fauna reserves, scenic reserves, state and national parks, and water catchment areas. (d) Includes other timber reserves, land reserved for fuel supply, and vacant forested crown land. Excludes Aboriginal reserves in the N.T. totalling 29,286,000 acres which are estimated to be 90 per cent forest.

**Categories of forest reserves**

- (i) *Production reserves* consist of forest lands 'permanently' reserved—by law whether Federal, State or local—for the production of logs, pulpwood, pit props, poles, posts or fuelwood for commercial purposes.
- (ii) *Protection reserves* consist of reserved lands, the management of which is principally aimed at the protection of natural resources, of fauna and flora, or at other purposes not directly related to the production of wood (e.g., parks, watersheds, soil conservation areas, etc.). Industrial cutting may or may not be allowed in these protection reserves. Industrial cutting includes the cutting of logs, pulpwood, pit props, poles, posts, fuelwood for commercial purposes. The production of logs for the production of sawnwood for local consumption is considered as industrial cutting; however, the cutting of poles and fuelwood for personal consumption on a casual or occasional basis is not considered as an industrial cutting.
- (iii) *All other reserves* consist of reserved forest lands not included above.

A considerable proportion of the permanently reserved areas is in inaccessible mountainous country, and many of the forests contain a mixture of species, only some of which are at present of commercial value. Much of the area consists of inferior forest, and a large proportion of the whole has been seriously degraded by recurrent fires.

**Plantations**

The indigenous forest of Australia does not contain adequate supplies of coniferous timber, and Australia's requirements have had to be met largely by imports. As a result of the planned policy of the forest services and of several private commercial organisations, the area of coniferous plantations, mainly of exotic species, is steadily increasing. It was natural that this aspect of forestry should receive earliest attention in South Australia, as this is the State most poorly endowed with natural forest. South Australia now has a larger area of planted conifers than most other States in Australia, and for some years has been exploiting considerable quantities of timber from these plantations. Production is also increasing in the other States, and the thinnings from their plantations are already supplying a significant volume of timber.

The total production of roundwood from Australia's coniferous plantations is now more than 85 million cubic feet per annum and is expected to increase substantially during the next decade.

A special article prepared by the Forestry and Timber Bureau giving a detailed account of the history and development of coniferous plantations and of the characteristics of individual species is included in Year Book No. 44, page 975.

Broadleaved plantations (mainly *Eucalyptus* spp.) comprise a much smaller area, and the total acreage at 31 March 1971 was 88,089 acres, about one-quarter of which was brown mallet (*E. astringens*). Plantations of this species have been established in Western Australia for tan bark production.

**AREA OF CONIFEROUS PLANTATIONS, BY TYPE OF PLANTATION  
31 MARCH 1967 TO 1971**

(Source: Forestry and Timber Bureau)

(Acres net)

State or Territory	Government			Private			Grand total
	<i>Pinus radiata</i>	<i>Other species</i>	<i>Total</i>	<i>Pinus radiata</i>	<i>Other species</i>	<i>Total</i>	
31 March 1971—							
New South Wales . .	165,557	25,265	190,822	16,460	16,619	33,079	223,901
Victoria . . . . .	101,547	9,482	111,029	121,985	7,589	129,574	240,603
Queensland . . . . .	4,149	169,018	173,167	852	41,679	42,531	215,698
South Australia . . .	151,265	16,187	167,452	39,144	18	39,162	206,614
Western Australia(a) .	28,819	42,696	71,515	7,505	296	7,801	79,316
Tasmania . . . . .	42,730	478	43,208	17,578	10	17,588	60,796
Northern Territory . .	..	5,561	5,561	..	..	..	5,561
Australian Capital Territory . . . . .	28,237	2,748	30,985	..	..	..	30,985
Australia, 31 March 1971 . . . . .	522,304	271,435	793,739	203,524	66,211	269,735	1,063,474
31 March—							
1970 . . . . .	483,080	248,529	731,609	190,986	55,964	246,950	978,559
1969 . . . . .	438,097	228,291	666,388	187,035	52,865	239,900	906,288
1968 . . . . .	395,215	207,176	602,391	161,326	47,224	208,550	810,941
1967 . . . . .	368,597	196,564	565,161	147,053	40,415	187,468	752,629

(a) Estimated.



### Forest administration and research

*Commonwealth Forestry and Timber Bureau.* The functions of the Commonwealth Forestry and Timber Bureau are laid down in the *Forestry and Timber Bureau Act 1930-1953* and include forestry research and education, the study of timber supply, and advice to the Government on forestry matters. The administering department is the Department of National Development.

In 1961 the Commonwealth Government expanded its activities in forestry research in Australia. The existing Forestry and Timber Bureau Divisions of Silvicultural Research and Forest Management Research were combined to form the Forest Research Institute as a separate branch of the Bureau. The purpose of the Institute is to provide complete coverage in forestry research, ensuring that all problems of primary importance to the practice and development of forestry in Australia are investigated. In developing a programme with this objective, the Institute takes account of the research activities and potential of the State forest services and other organisations. The research work carried out by the existing sections of the Forest Research Institute covers a wide range of studies, including the following: factors affecting tree growth, tree breeding, introduction of exotic species, forest nutrition, forest botany, forest entomology and pathology, fire protection, watershed management, forest mensuration, forest management and management economics, aerial inventory, biometrics, and tree seed. The Forest Research Institute maintains six regional establishments in the Commonwealth, two of which have an outstation in addition to the regional headquarters. These research stations are run on a co-operative basis with State forest services and private forest companies or other government instrumentalities.

The Forestry and Timber Bureau also maintains a Timber Supply Economics Branch concerned with the compilation and analysis of statistics of production, consumption and trade in timber and other forest products. This Branch also carries out studies in forest economics and research into logging methods and machines. Advice on timber supply matters is currently made available to government departments and private enterprise. Research is also undertaken on matters associated with the marketing of timber products.

*Commonwealth Scientific and Industrial Research Organization.* The Divisions of Building Research and Applied Chemistry carry out a wide range of investigations relating to the properties of wood and the uses of wood and wood products. These activities were formerly carried out by the Division of Forest Products which, in May 1971, ceased to be a separate entity within C.S.I.R.O. following a reorganisation of C.S.I.R.O. research effort in the field of forest products. That part of the Division of Forest Products concerned with wood as a structural material was integrated with the Division of Building Research, and the remaining part, which was concerned with research for the paper and pulp industry, was integrated with the Division of Applied Chemistry. Most of the present forest products activities of both Divisions are conducted at premises in South Melbourne now known as the C.S.I.R.O. Forest Products Laboratory.

At the Forest Products Laboratory research work administered by the Division of Building Research is carried out by six separate Sections: Timber Physics, Timber Structures, Timber Engineering Science, Forest Conversion Engineering and Forest Conversion Science. In addition, the Division provides assistance to individuals and industry, administers courses of instruction on timber properties and usage, and maintains co-operative projects with overseas authorities operating in the same fields. The research sections working at the Laboratory as units of the Division of Applied Chemistry are Paper Science, and Wood and Forest Science.

*Forestry in the Territories.* Forestry activities in Papua New Guinea are controlled by the Administration through its Department of Forests. The management of forests in the Australian Capital Territory is the responsibility of the Forestry Branch of the Department of the Interior.

The Forestry and Timber Bureau advises the Administrations of the Australian External Territories on the management of the forests in those Territories. Forests in the Northern Territory are under the control of the Forestry Branch of the Northern Territory Administration.

*Forestry activities of the States.* Forestry on State-owned lands in the various States is the responsibility of the respective State Governments, but they do not exercise any control over forestry activities on private property. The powers and functions of State forest authorities are laid down under forest Acts and Regulations. In each State there is a department or commission to control and manage State forests. Its functions include the introduction of proper measures for the control and management of forest land; the protection of forest land; the conversion, marketing and economic utilisation of forest products; the securing of an adequate and permanent reservation of State forests; and the establishment and maintenance of coniferous forests to remedy the existing deficiency of conifers in Australia. All State forest services are actively engaged on research programmes. Annual reports are issued by each State forest authority.

In addition to developing permanent forest reserves in each State, foresters are surveying all forested Crown lands with a view to obtaining dedications of new State forests to add to the permanent forest estate or to release for other uses areas unsuitable for forestry. State forest authorities control over 15 million acres of timber reserves, national parks, etc. They also usually control all timber on unoccupied Crown lands.

*Private forestry.* Privately owned lands contribute considerably to the total production from Australian forests. The most important areas of managed native forest in private ownership are the forests owned by pulp and paper companies. Schemes of financial assistance to individual land owners—designed primarily to encourage establishment and management of coniferous plantations—have been introduced by the Governments of New South Wales and Victoria.

The area of privately owned coniferous plantations is rapidly increasing, and here again the pulp and paper companies are very active. In step with the increase in afforestation programmes, the number of professional foresters employed in private forestry enterprise is increasing, while several are engaged on research.

The area of coniferous plantations established by private companies and individuals is included in the table on page 868.

### Forestry education

The functions of the Australian Forestry School at Canberra, previously a division of the Forestry and Timber Bureau, were taken over by the Australian National University at the beginning of the 1965 academic year. The school was absorbed into the University's School of General Studies as the Department of Forestry. This Department provides a full four-year training leading to the degree of B.Sc. in forestry. The University of Melbourne also maintains a School of Forestry which gives training leading to a B.Sc. degree in forestry. The Universities in all States provide facilities for post-graduate studies leading to higher degrees for forestry graduates.

The Victorian Forests Commission maintains a Forestry School at Creswick where recruits are trained, mainly for employment in the Commission.

### The Australian Forestry Council

The Australian Forestry Council comprises the Ministers responsible for forestry in the six State Governments and the Commonwealth Ministers for National Development, Interior, and External Territories.

The Council is intended to provide the means for the mutual exchange between the State and Commonwealth Governments of information and views on forestry. It co-ordinates research into problems affecting the establishment, development, management, and fire protection of all forests, and the utilisation of forest products. It assists in co-ordinating the work of State and Commonwealth Governments and also private enterprise in the development of Australian forestry.

The Council is supported by a Standing Committee, consisting of the Director-General of the Forestry and Timber Bureau, the heads of each of the six State Forest Services, the Chief of the Division of Building Research, C.S.I.R.O., the Secretary of the Department of the Interior and the Secretary of the Department of External Territories.

### Fire protection

The provision of adequate fire protection is one of the main problems facing forest and rural authorities. Government and private forestry organisations are responsible for the protection of about 47 million acres of forest land, of which a relatively accessible area of 23 million acres is given a high degree of protection, about 17 million acres in the more inaccessible areas receive a lesser degree of protection, and about 7 million acres are at present not protected. Other extensive forest areas consisting mainly of vacant Crown land, but including land under private ownership or leasehold, are either not protected or are given some degree of fire protection by rural fire-fighting organisations or Government-financed fire protection associations.

During the 1970-71 fire season a total of 1,018 fires were recorded over the area of 40 million acres of forest land afforded either intensive or extensive protection by forest authorities. The area burnt by these fires totalled 176,144 acres or 0.4 per cent of the area protected.

The number of fires and the area of native forest burnt during the last ten years is shown in the following table.

## NUMBER OF FIRES AND FOREST AREA BURNT, 1961-62 TO 1970-71

(Source: Forestry and Timber Bureau)

Year	Protected forest areas(a)		
	Number of fires	Forest area burnt	Percentage of forest area burnt
		'000 acres	
1961-62	1,761	297	0.8
1962-63	1,299	275	0.7
1963-64	1,494	549	1.5
1964-65	2,307	1,626	4.1
1965-66	1,865	465	1.2
1966-67	1,422	388	1.0
1967-68	1,754	754	1.9
1968-69	2,165	1,885	4.7
1969-70	905	130	0.3
1970-71	1,018	176	0.4

(a) The area receiving protection has been taken as the 40 million acres for which State forest services provide protection.

Very intensive fire protection is afforded to the coniferous plantation area of Australia. This area is increasing rapidly and the annual planting programme is now between 60,000 and 70,000 acres. During the 1970-71 fire season a total of 1,404 acres was burnt, representing 0.14 per cent of the area of 1,038,000 acres for which fires statistics are available.

The area of coniferous plantations burnt during the past ten years is shown in the following table.

CONIFEROUS PLANTATIONS AREA BURNT AND  
TOTAL AREA, 1961-62 TO 1970-71

(Source: Forestry and Timber Bureau)

Year	Number of fires	Area burnt	Area of coniferous plantations(a)	Percentage of coniferous area burnt
		acres	acres	
1961-62	.	598	472,000	0.13
1962-63	.	475	492,000	0.10
1963-64	.	418	515,000	0.08
1964-65	.	3,130	556,000	0.56
1965-66	.	1,520	610,000	0.25
1966-67	.	461	660,835	0.07
1967-68	.	288	729,928	0.04
1968-69	.	39	781,000	0.29
1969-70	.	51	874,000	0.02
1970-71	.	40	1,038,000	0.14

(a) This area does not include certain privately owned coniferous plantations for which fire statistics are not available. In 1969-70 the area for which no statistics were available was 105,000 acres; in 1970-71, 30,000 acres.

Detailed information on fire protection is given in Year Book No. 55, 1969, pages 966-7.

## Commonwealth loans to expand softwood plantations

In February 1965 the Australian Forestry Council recommended that the rate of expansion of softwood timber plantings in Australia should be increased from their existing level of about 40,000 acres a year to 75,000 acres a year for the next thirty-five years. The recommendations envisaged a phased increase in the rate of Government plantings by the various State Governments up to a level of some 63,000 acres per annum together with plantings by the Commonwealth in the Territories of 2,000 acres per annum, and an average of at least 10,000 acres per annum by private forest owners. The Council considered that such a programme would make a major contribution towards meeting Australia's future requirements for softwood products.



In February 1966 the Commonwealth Government endorsed this recommendation and agreed, as a first step towards achieving the proposed annual target of 75,000 acres, to provide financial assistance to each State, over a five-year period commencing 1 July 1966, to enable them to accelerate their rate of softwood plantings. The assistance, which is provided to the States under Section 96 of the Constitution, took the form of long-term loans repayable over twenty-five years with repayments of principal and the payment of interest commencing ten years after the date of each advance. The *Softwood Forestry Agreements Act* 1967 authorised the Commonwealth to enter into agreements with each of the States to provide financial assistance by way of loans during the financial years 1966-67 to 1970-71 inclusive. Payments under the Act by the Commonwealth to all States in 1966-67 amounted to \$291,000, in 1967-68 to \$3,456,000, in 1968-69 to \$3,872,000, in 1969-70 to \$4,814,000, in 1970-71 to \$4,784,000, and in 1971-72 to \$389,338.

In February 1969 the Australian Forestry Council recommended a continuation of Commonwealth financial assistance to the States for softwood timber planting for a further five-year period. The Commonwealth Government agreed in principle to the Australian Forestry Council's recommendations and following negotiations with the States it was agreed that the Commonwealth would assist towards a State planting programme of 54,680 acres per annum on the same terms and conditions as in the first five-year programme. At the end of 1971-72 the *Softwood Forestry Agreements Bill* 1972 was introduced in the Commonwealth Parliament. Subject to the passage of this legislation, it is estimated that payments to all States would be \$9.1 million in 1972-73, of which \$4.1 million would be made available to cover expenditure incurred in 1971-72 and \$5 million in 1972-73.

### Employment in forestry

#### Persons engaged in forestry activities, 1966 census

The number of persons whose industry statements were classified to 'forestry' (excluding saw-milling) at the 1966 population census was 13,492 out of a total of 512,994 in all primary industries and 4,856,455 in the total work force. For further information see the chapter Employment and Unemployment, also 1966 Census Bulletin No. 9.6, *Population: by Industry and Occupational Status, Australia*.

#### Employment by Forestry Departments

In the following table details are shown of the number of persons employed by State forestry departments, the Northern Territory Administration, and by the Forestry and Timber Bureau in the Australian Capital Territory at 30 June 1971.

PERSONS EMPLOYED BY FORESTRY DEPARTMENTS  
STATES AND TERRITORIES, 30 JUNE 1971

Occupational group	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Professional staff . . . . .	316	259	187	85	66	45	7	16	981
Non-professional field staff . . . . .	306	272	94	30	263	140	28	2	1,135
Clerical staff . . . . .	293	283	241	115	56	81	17	7	1,093
Extraction of timber . . . . .	(a) 1,461	..	..	..	17	..	14	..	5,921
Milling of timber . . . . .		..	..	576	41	..	22	..	
Labour (forest workers, etc.) . . . . .		828	1,696	285	481	333	94	73	
Total . . . . .	2,376	1,642	2,218	1,091	924	599	182	98	9,130

(a) Excludes milling of timber.

#### Log sawmilling and veneer and plywood, etc., manufacturing activities

Selected details of the operations of establishments engaged in log sawmilling and the manufacture of plywood, etc., are set out in the tables below. These details were compiled from the annual censuses of Manufacturing for 1968-69 and 1969-70. For further details of the Manufacturing Census see Chapter 21, Manufacturing Industry.



**MANUFACTURING ESTABLISHMENTS—LOG SAWMILLING (A.S.I.C. CLASS 2511)(a)**  
**SUMMARY OF OPERATIONS, 1968-69 AND 1969-70**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>	
1968-69										
Establishments in operation during the year . . . . .	No.	454	302	343	46	136	222	..	3	1,506
Employment(b) . . . . .	..	5,502	3,385	3,540	(c)	2,845	1,678	..	(c)	17,710
Turnover . . . . .	\$'000	53,101	32,849	28,812	(c)	25,850	15,029	..	(c)	164,325
Value added . . . . .	..	29,153	19,194	14,474	(c)	15,885	7,819	..	(c)	90,535
Fixed capital expenditure (outlay on fixed tangible assets less disposals) . . . . .	..	1,999	1,317	1,059	(c)	1,717	715	..	(c)	6,955
1969-70										
Establishments in operation during the year . . . . .	No.	452	292	326	45	121	202	..	3	1,441
Employment(b) . . . . .	..	5,227	3,344	3,500	(c)	2,377	1,640	..	(c)	16,868
Turnover . . . . .	\$'000	55,501	35,029	32,220	(c)	23,871	13,481	..	(c)	171,881
Value added . . . . .	..	31,046	20,529	18,236	(c)	15,907	7,145	..	(c)	98,622
Fixed capital expenditure (outlay on fixed tangible assets less disposals) . . . . .	..	1,979	1,441	1,137	(c)	526	523	..	(c)	5,688

(a) Australian Standard Industrial Classification. See page 720.

(b) As at 30 June; includes working proprietors.

(c) Not available for publication.

**MANUFACTURING ESTABLISHMENTS—PLYWOOD, VENEER AND MANUFACTURED BOARDS OF WOOD (A.S.I.C. CLASS 2513)(a): SUMMARY OF OPERATIONS, 1968-69 AND 1969-70**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>	
1968-69										
Establishments in operation during the year. . . . .	No.	37	12	28	7	5	3	..	..	92
Employment(b) . . . . .	..	2,670	683	2,643	548	(c)	(c)	..	..	7,498
Turnover . . . . .	\$'000	29,507	10,342	26 611	6,742	(c)	(c)	..	..	86,003
Value added . . . . .	..	13,626	4,859	11,728	2,845	(c)	(c)	..	..	38,611
Fixed capital expenditure (outlay on fixed tangible assets less disposals) . . . . .	..	2,199	297	626	2,040	(c)	(c)	..	..	5,590
1969-70										
Establishments in operation during the year. . . . .	No.	38	12	25	7	4	3	..	..	89
Employment(b) . . . . .	..	2,879	769	2,305	590	(c)	(c)	..	..	7,499
Turnover . . . . .	\$'000	35,093	11,825	27,936	9,166	(c)	(c)	..	..	98,554
Value added . . . . .	..	16,588	5,058	11,086	4,912	(c)	(c)	..	..	43,766
Fixed capital expenditure (outlay on fixed tangible assets less disposals) . . . . .	..	783	687	926	506	(c)	(c)	..	..	3,345

(a) Australian Standard Industrial Classification. See page 720.

(b) As at 30 June; includes working proprietors.

(c) Not available for publication.

## Forest production

## Forest products

## FOREST PRODUCTION(a): STATES AND TERRITORIES, 1970-71

Product		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Logs for sawing, peeling, slicing, or pulping—</b>										
<b>Broadleaved—</b>										
Eucalypt and related species	'000 cu ft	57,209	73,155	18,582	686	43,055	62,258	29	..	254,974
Rain forest species(b)	"	4,570	..	8,259	..	..	..	..	..	12,829
<b>Coniferous—</b>										
<b>Indigenous forest 'pines'—</b>										
Cypress	"	5,329	..	6,283	..	..	..	39	..	11,651
Other	"	..	..	2,016	..	..	301	..	..	2,317
Plantation grown 'pines'	"	12,249	19,558	5,323	31,461	3,102	2,010	..	1,960	75,662
<b>Total logs</b>	"	<b>79,357</b>	<b>92,713</b>	<b>40,463</b>	<b>32,147</b>	<b>46,156</b>	<b>64,569</b>	<b>68</b>	<b>1,960</b>	<b>357,434</b>
<b>Value of logs(c)</b>	<b>\$'000</b>	<b>25,204</b>	<b>32,659</b>	<b>14,741</b>	<b>7,763</b>	<b>9,479</b>	<b>14,037</b>	<b>21</b>	<b>459</b>	<b>104,363</b>
<b>Hewn and other timber (not included above)—</b>										
Firewood(d) (weight)	'000 tons	156	233	55	455	624	412	2	..	1,937
Other(e) (value)	\$'000	11,471	2,619	3,928	532	(f)1,504	(g)263	5	107	(h)20,429
<b>Value of hewn and other timber</b>	"	<b>12,571</b>	<b>4,620</b>	<b>4,258</b>	<b>3,204</b>	<b>(f)5,871</b>	<b>(g)3,046</b>	<b>16</b>	<b>107</b>	<b>(h)33,692</b>
<b>Other forest products(i) (total value)</b>	"	<b>341</b>	<b>88</b>	<b>592</b>	<b>53</b>	<b>(j)5</b>	<b>(k)</b>	<b>..</b>	<b>..</b>	<b>(h)1,079</b>
<b>Total value of forest products</b>	"	<b>38,116</b>	<b>37,366</b>	<b>19,590</b>	<b>11,019</b>	<b>(l)16,176</b>	<b>17,083</b>	<b>37</b>	<b>567</b>	<b>139,955</b>

(a) Excludes some production from private land, thought to be relatively small, details of which are not available. (b) Brushwoods and scrubwoods. (c) See footnote (c) to the table Forest Production: Australia, 1966-67 to 1970-71, below. (d) Excludes mill waste used as firewood. (e) Includes sleepers, transoms, girders, bridge timbers, mining timber, poles, piles, etc. (f) Excludes value of timber used for tannin extract, details of which are not available for publication. (g) Includes value of "Other forest products". (h) Incomplete: see individual States. (i) Includes charcoal (forest production only), tanning bark, essential oils, eucalyptus leaves, crude rutin, etc. (j) Excludes value of sandalwood and substitutes, details of which are not available for publication. (k) Not available for publication. (l) Includes value of timber used for tanning extract and sandalwood and substitutes.

## FOREST PRODUCTION(a): AUSTRALIA, 1966-67 TO 1970-71

Product		1966-67	1967-68	1968-69	1969-70	1970-71
<b>Logs for sawing, peeling, slicing, or pulping—</b>						
<b>Broadleaved—</b>						
Eucalypt and related species	'000 cu ft	249,985	253,723	254,717	255,466	254,974
Rain forest species(b)	"	12,131	12,755	13,272	13,333	12,829
<b>Coniferous—</b>						
<b>Indigenous forest 'pines'—</b>						
Cypress	"	11,402	12,179	11,374	12,131	11,651
Other	"	3,568	3,475	3,696	3,251	2,317
Plantation grown 'pines'	"	61,385	59,134	65,669	72,317	75,662
<b>Total logs</b>	"	<b>338,471</b>	<b>341,266</b>	<b>348,727</b>	<b>356,498</b>	<b>357,434</b>
<b>Value of logs</b>	<b>\$'000</b>	<b>88,169</b>	<b>89,552</b>	<b>(c)90,340</b>	<b>(c)96,607</b>	<b>(c)104,363</b>
<b>Hewn and other timber (not included above)—</b>						
Firewood(d) (weight)	'000 tons	2,143	1,914	1,847	1,950	1,937
Other(e) (value)	\$'000	15,477	16,926	(f)17,344	(f)18,055	(f)20,429
<b>Value of hewn and other timber(g)</b>	"	<b>28,112</b>	<b>27,702</b>	<b>(f)28,070</b>	<b>(f)29,623</b>	<b>(f)33,692</b>
<b>Other forest products(h) (total value)</b>	"	<b>801</b>	<b>851</b>	<b>(i)774</b>	<b>(i)843</b>	<b>(i)1,079</b>
<b>Total value of forest products(j)</b>	"	<b>117,746</b>	<b>118,769</b>	<b>119,717</b>	<b>127,669</b>	<b>139,955</b>

(a) Excludes some production from private land, thought to be relatively small, details of which are not available. (b) Brushwoods and scrubwoods. (c) Included in this category are amounts attributable to sawmillers who carry out their own logging activities as a secondary part of their operations. As such, the values are attributable to the sawmilling industry which is part of manufacturing industry. However, the amount has been included in this table so that the overall value of forest products might be shown. The amount in question is estimated to be \$26.1 million for 1968-69, or 28.9 per cent of the Australian total of \$90.3 million; and \$29.5 million in 1969-70, or 30.5 per cent of the total of \$96.6 million. An estimate of the amount for 1970-71 is not available. (d) See footnote (d) to previous table. (e) See footnotes (e) and (f) to previous table. (f) Includes "other forest products" for Tasmania. (g) Incomplete; see footnote (f) to previous table. (h) See footnotes (i) and (j) to previous table. (i) Incomplete: figure for Tasmania included in 'Value of hewn and other timber'. (j) Includes value of timber used for tannin extract and sandalwood and substitutes in Western Australia.

## Value of production

While statistics of both the gross value (at principal markets) and local value (at place of production) of the forestry industry are available, particulars of the value of materials used in the process of production are not available for all States. For this reason values cannot be stated on a net basis, as has been done with most other industries. A more detailed reference to the value of production of forestry and other industries in Australia, as well as a brief explanation of the terms used, will be found in the chapter Miscellaneous.

**GROSS AND LOCAL VALUE OF FORESTRY PRODUCTION: STATES AND TERRITORIES**  
**1966-67 TO 1970-71**  
(\$'000)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>GROSS VALUE(a)</b>									
1966-67 .	31,631	29,675	17,199	8,888	13,301	16,627	73	351	117,746
1967-68 .	35,140	27,845	17,683	8,128	14,077	15,488	42	365	118,769
1968-69 .	34,369	28,517	18,411	8,528	13,465	16,015	42	371	119,717
1969-70 .	37,677	28,254	18,162	10,530	13,632	18,898	52	465	127,669
1970-71 .	38,116	37,366	19,590	11,019	16,176	17,083	37	567	139,955
<b>LOCAL VALUE(b)</b>									
1966-67 .	30,967	29,036	12,631	8,853	12,473	14,332	73	351	108,716
1967-68 .	34,162	27,448	12,948	8,100	13,274	13,420	42	365	109,759
1968-69 .	33,649	28,174	13,472	8,499	12,591	13,546	42	371	110,344
1969-70 .	36,832	27,939	13,081	10,501	12,795	16,132	52	465	117,797
1970-71 .	37,293	36,966	14,059	10,989	14,847	14,201	37	567	128,960

(a) Gross production valued at principal markets.

(b) Gross production valued at place of production.

### Timber and timber products

#### Mill production of timber

Particulars of logs treated and the production of sawn, peeled and sliced timber by sawmills and other woodworking establishments are shown in the following table. The figures prior to 1968-69 have been compiled from annual factory collections, which cover virtually all sawmills. The only omissions are some small portable mills operated by itinerants, e.g. sleeper cutters. Figures for 1968-69 have been compiled from the Manufacturing Census of the Integrated Economic Censuses and are not strictly comparable with previous years because of changes in the census units and scope.

**OUTPUT OF AUSTRALIAN-GROWN TIMBER: ALL MILLS**  
**STATES AND TERRITORIES, 1968-69(a)**  
('000 super ft)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>	<i>Aust.(b)</i>
Sawn, peeled or sliced timber produced from logs—								
Broadleaved . . . .	338,831	280,091	132,650	3,741	179,250	166,001	..	1,100,564
Coniferous . . . .	60,918	35,275	65,965	104,367	8,802	1,337	6,313	282,977
<b>Total timber produced .</b>	<b>399,748</b>	<b>315,366</b>	<b>198,615</b>	<b>108,108</b>	<b>188,052</b>	<b>167,338</b>	<b>6,313</b>	<b>1,383,540</b>

(a) Statistics for 1969-70 are not yet available, see page 719.

(b) Nil production was recorded in the Northern Territory.

**OUTPUT OF AUSTRALIAN-GROWN TIMBER, ALL MILLS: AUSTRALIA(a)**  
**1964-65 TO 1968-69(b)**  
('000 super ft)

	<i>1964-65</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>
Logs treated—					
Broadleaved . . . .	2,767,843	(c)2,371,263	(c)2,313,256	(c)2,341,895	n.a.
Coniferous . . . .	728,691	(c)569,521	(c)554,838	(c)532,965	
<b>Total logs treated . . .</b>	<b>3,496,535</b>	<b>(c)2,940,784</b>	<b>(c)2,868,093</b>	<b>(c)2,874,860</b>	
Sawn, peeled or sliced timber produced from logs above—					
Broadleaved . . . .	1,202,924	1,178,473	1,143,814	1,165,376	1,100,564
Coniferous . . . .	329,508	329,532	317,591	307,684	282,976
<b>Total timber produced . .</b>	<b>1,532,433</b>	<b>1,508,005</b>	<b>1,461,405</b>	<b>1,473,059</b>	<b>1,383,540</b>

(a) Excludes Australian Capital Territory and Northern Territory for years prior to 1968-69. (b) Statistics for 1969-70 are not yet available, see page 719. (c) Gross hoppus basis: not necessarily comparable with details for years prior to 1965-66, which are generally on a true volume basis. Gross hoppus measure is approximately 78.5 per cent of the true volume.

In addition to the mill production of timber shown in the preceding tables, a large quantity of hewn and round timber, e.g. sleepers, piles, poles, fencing timber, timber used in mining and fuel, is obtained directly from forest and other areas. Information in respect of the value of this output may be found in the tables dealing with forest production on page 874.

#### Veneers, plywood, etc.

Cutting of timber for the manufacture of veneers, plywood, etc., has been carried out in most States for a number of years. In recent years this has been considerably extended, since plywood manufacture has allowed the use of some species unsuitable for sawing. Special attention has been paid to ensure that logs suitable for peeling are diverted to ply factories.

#### PLYWOOD PRODUCED: AUSTRALIA, 1964-65 TO 1968-69(a)

('000 square feet:  $\frac{3}{16}$ -in basis)

State	1964-65	1965-66	1966-67	1967-68	1968-69(b)
New South Wales . . .	59,045	(c)	58,791	64,903	71,087
Queensland . . . . .	(c)	(c)	(c)	(c)	83,961
Other States . . . . .	(c)	52,296	(c)	(c)	74,743
<b>Australia . . . . .</b>	<b>217,059</b>	<b>187,258</b>	<b>200,451</b>	<b>230,018</b>	<b>229,791</b>

(a) Statistics for 1969-70 are not yet available, see page 719. Excludes Australian Capital Territory and Northern Territory before 1968-69. (b) Includes Australian Capital Territory and Northern Territory. (c) Not available for publication.

Of the total plywood produced in 1968-69, 125,033,000 square feet ( $\frac{3}{16}$ -in. basis) were classed as 'Commercial', 80,580,000 as 'Waterproof', 2,743,000 as 'Case', and 21,435,000 as 'Sliced fancy'.

During 1968-69, 709.6 million square feet ( $\frac{1}{8}$ -in. basis) of veneers were produced by the rotary process for the manufacture of plywood. In addition, 58.8 million square feet of sliced veneers were produced.

#### Manufactured boards

Particle board, resin or cement bonded of acoustic and other composition, amounted to 134,516,000 square feet during 1968-69.

#### Woodchips

Woodchips are manufactured from sawmill waste and other timber otherwise of little or no commercial value. Their primary use is the production of wood pulp. The recently established wood-chip industry in Australia at present produces only for export to Japan, although there are long-term plans for the Australian production and export of wood pulp made from woodchips.

There are four companies, three in Tasmania and one in New South Wales, which operate chipping mills and which have entered into agreements to export woodchips to Japanese pulp mills. These agreements, covering periods ranging from 5 to 18 years, have committed for export more than 30 million tons of woodchips valued at about \$460 million. It is expected that by 1975 Australia will be exporting annually about 2.8 million tons of woodchips valued at nearly \$43 million. The first shipment of woodchips took place in January 1971 from Eden on the south coast of New South Wales to Japan. Two of the Tasmanian companies have already commenced shipments and by the first half of 1973 the other is expected to have commenced. Supplies of timber for chipping will come from State and privately owned forest lands, and from sawmill residues.

#### Wood pulp and paper

*Wood pulp.* During 1969-70 wood pulp production was 513,039 tons of chemical, mechanical and other pulp. During the previous year production was 410,933 tons.

Detailed information relating to the types and methods of production of wood pulp in the various States was published in Year Book No. 50, 1964, page 1110.

*Paper and paper board.* Paper and paper board are manufactured in all States but the greater part of the industry is in New South Wales, Victoria and Tasmania. During 1969-70 twenty-one paper mills were operating, nine in Victoria, three in New South Wales, four in Tasmania, two each in Queensland and South Australia, and one in Western Australia. A wide variety of paper and paper board is produced in Australian mills. The table below gives details of the production of some of the principal items.



## PRODUCTION OF PAPER PRODUCTS: AUSTRALIA, 1967-68 TO 1969-70

Type of paper	Quantity (tons)			Value (\$'000)		
	1967-68(a)	1968-69	1969-70	1967-68(a)	1968-69	1969-70
Newsprint . . . . .	92,648	123,935	170,576	12,688		
Blotting . . . . .	569	521	494	161		
Duplicating . . . . .	10,212	10,898	9,564	3,876		
Printing and writing . . . . .	112,780	121,013	124,271	35,922		
Wrapping—						
Kraft . . . . .	183,591	230,444	268,433	43,344	Not yet available See page 719	
Other . . . . .						
Paper felts . . . . .	1,164	1,356	1,535	243		
Paper boards . . . . .	334,660	342,403	378,894	57,093		

(a) Excludes Australian Capital Territory and Northern Territory.

## Overseas trade in forest products, timber and timber products

## Imports

IMPORTS OF FOREST PRODUCTS, TIMBER AND TIMBER PRODUCTS  
AUSTRALIA, 1968-69 TO 1970-71

	Quantity			Value (\$'000 f.o.b.)		
	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
Crude wood, timber and cork—						
Wood waste and charcoal . . . . .				16	18	16
Wood in the rough or roughly squared . . '000 sup ft	49,033	54,871	45,460	3,322	3,671	3,165
Wood shaped or simply worked—						
Timber, sawn lengthwise, sliced or peeled, but not further prepared, of a thickness exceeding 5 mm—						
Conifer—						
Douglas fir . . . . .	195,132	165,323	176,129	21,785	21,479	19,970
Hemlock and balsam . . . . .	12,562	19,733	24,803	1,175	1,791	2,040
Radiata pine . . . . .	29,474	28,384	29,841	2,108	2,214	2,423
Redwood . . . . .	30,065	2,225	2,328	4,455	487	510
Western red cedar . . . . .	31,855	27,800		5,963	4,963	
Other . . . . .	17,693	15,570		2,609	(a)3,405	
Total conifer . . . . .	284,926	263,090		32,123	34,543	(a)33,310
Non-conifer . . . . .				10,707	13,089	13,964
Timber (including blocks, strips, etc.), planed, tongued, grooved, rebated, etc., but not further manufactured—						
Conifer . . . . .	'000 sup ft	5,028	4,470	5,356	802	844
Non-conifer . . . . .	1,756	3,125	4,337	336	618	1,050
Cork, raw and waste . . . . .				282	294	426
Selected items of forest origin, other than crude wood, timber and cork—						
Tanning extracts of vegetable origin . . cwt	96,015	63,524	56,824	565	570	543
Wood and cork manufactures (except furniture)—						
Veneers, plywoods, 'improved' or reconstituted wood and other wood, worked, n.e.s. . . . .				8,580	9,022	10,331
Wood manufactures n.e.s. (household utensils, domestic utensils, building carpentry, etc.) . . . . .				4,417	4,966	5,274
Cork manufactures . . . . .				1,372	1,398	1,667

(a) Includes a value of \$38,373 for which no quantity has been included.

Imports of coniferous timbers, shaped or simply worked, came mainly from Canada, the United States of America and New Zealand in 1970-71. Malaysia was the source of by far the greater proportion of non-coniferous timber imports. Malaysia, the Federal Republic of Germany and the United Kingdom supplied most of Australia's imports of veneers, while plywood imports came mainly from Papua New Guinea and the Republic of China (Taiwan).

## Exports

EXPORTS OF AUSTRALIAN FOREST PRODUCTS, TIMBER AND TIMBER PRODUCTS(a)  
AUSTRALIA, 1968-69 TO 1970-71

		Quantity			Value (\$'000 f.o.b.)		
		1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
Crude wood, timber and cork—							
Wood waste and charcoal (including shell and nut charcoal)		..	3,218	6,048	86	23	13
Wood in the rough or roughly squared		..			286	476	612
Wood, shaped or simply worked—							
Railway or tramway sleepers	'000 sup ft	3,312	8,214	8,883	522	1,279	1,541
Timber, sawn lengthwise, sliced or peeled, but not further prepared, of a thickness exceeding 5 mm—							
Conifer	"	143	169	617	37	46	136
Non-conifer—Jarrah	"	6,723	5,672	2,114	1,169	940	363
Other	"	6,281	6,546	6,370	1,123	1,248	1,258
Timber (including blocks, strips, and friezes for parquet or wood block flooring, not assembled), planed, tongued, etc.—							
Conifer	"	540	562	803	146	130	211
Non-conifer	"	624	453	145	114	121	47
Cork, raw and waste	cwt	101	40	..	5	1	..
Selected items of forest origin other than crude wood, timber and cork—							
Natural gums, resins, gum-resins, balsam and lacs	'000 lb	7,569	7,839	7,233	60	61	51
Eucalyptus oil	"	205	304	244	149	180	153
Wood and cork manufactures (except furniture)—							
Veneers, plywood boards, etc.—							
Wood sawn lengthwise, sliced or peeled, not further prepared, veneer sheets and sheets for plywood, of a thickness not exceeding 5 mm	'000 sq ft	3,604	9,228	7,156	162	383	303
Plywood, blockboard, laminated wood products, inlaid wood and marquetry, cellular wood panels—							
Plywood	"	1,710	2,090	2,181	319	400	533
Other	"	1,928	633	1,548	162	57	107
Reconstituted wood, in panels, sheets or strips	"	1,262	1,844	2,358	191	311	351
Wooden beadings and mouldings	"	..	..	..	176	143	103
Improved wood, and wood simply shaped or worked, n.e.s.	"	..	..	..	25	12	30
Wood manufactures n.e.s., and plants and parts of plants used in dyeing and tanning	"	..	..	..	1,245	622	1,122
Cork manufactures n.e.s.	"	..	..	..	78	118	159

(a) Excludes re-exports.

## CHAPTER 25

### FISHERIES

Further information on subjects dealt with in this chapter is contained in the annual printed bulletin *Non-Rural Primary Industries* (10.23) and in the annual mimeographed statistical bulletins *Fisheries* (10.8)(10.9), particularly as regards types of fish, etc. caught.

#### Fisheries resources and their commercial exploitation

##### Fish

Approximately 2,000 species of marine and freshwater fish occur in and around Australia, about forty of which support substantial commercial fisheries. Most fishing is confined to waters over the continental shelf on the populous eastern and south-eastern seaboard, including Tasmania and South Australia, and off the south-western corner of the continent. As in other countries, fisheries in Australia may be divided into estuarine fisheries, located in the tidal waters of rivers and coastal lakes, beaches and bays; pelagic fisheries, which exploit species inhabiting the surface layers of the open ocean; and demersal fisheries, which fish the bottom layers of the sea. Estuarine fisheries produce considerable quantities of mullet (mainly *Mugil cephalus*), bream (*Acanthopagrus spp.*) and, in northern Australia, the valuable giant perch (*Lates calcarifer*). Important freshwater fisheries in New South Wales, Victoria and South Australia include those for Murray cod (*Maccullochella macquariensis*), golden perch (*Plectroplites ambiguus*) and eels (*Anguilla australis occidentalis*). Rainbow trout are farmed in Tasmania. Important pelagic fisheries include those for Australian 'salmon' (*Arripis trutta*), southern bluefin tuna (*Thunnus thynnus maccyii*), snoek (*Leionura artun*), mackerel (*Cybiium spp.*) and clupeoids (*Sardinops neopilchardus* and *Engraulis australis*). Demersal fisheries include those for snapper (*Chrysophrys auratus*), whiting (*Sillaginidae*) and the so called 'cods' (*Epinephelus*, etc.) from tropical waters. Trawl fisheries off New South Wales and Victoria yield species such as flathead (*Neoplatycephalus* and *Trudis spp.*), morwong (*Nemadactylus spp.*) and John Dory (*Zeus faber*). There is also an important fishery for edible shark (*Galeorhinus australis* and *Mustelus antarcticus*) in south-eastern Australia. A fishery for clupeoids in the Bass Strait which supplies the raw material for a fish meal plant at Lakes Entrance, Victoria, is the only 'industrial fishery' in Australia.

##### Crustaceans

The western and southern rock lobsters (*Panulirus cygnus* and *Jasus novaehollandiae*) which are taken on rocky reefs around the southern half of Australia, provide the most valuable fishery in Australia. Prawns (*Penaeus* and *Metapenaeus spp.*) are taken in estuarine, coastal and offshore waters of all States except Tasmania. This fishery has grown rapidly in recent years, especially in northern Australia. Bay lobsters (*Thenus spp.*) are taken incidentally to prawn trawling operations. Crabs (*Scylla* and *Portunus spp.*) are taken mainly in Queensland, New South Wales and Western Australia.

##### Molluscs (edible)

Naturally occurring oysters are harvested in all States; and in New South Wales and Queensland the Sydney rock oyster (*Crassostrea commercialis*) is cultured commercially. There is limited culture of other species in Tasmania and, recently, South Australia. Following a serious decline in catches in the scallop (*Pecten alba*) fishery based on stocks in Port Phillip Bay, Victoria, new offshore beds have been located in southern New South Wales, eastern Victoria and south-western Western Australia. However, substantial fluctuations in abundance results in erratic variation in production from year to year. A fishery based on the saucer scallop (*Amusium balloti*) is developing in another area of Western Australia, and there is a similar fishery in Queensland. An important abalone fishery has been developed since 1964 in south-east Australia with Tasmania, Victoria and South Australia providing the bulk of the catch. Mussels (*Mytilus planulatus*) are harvested in Victoria, and small quantities of cephalopods, mainly squid, are produced in many localities.

### Pearl-shell and trochus-shell

The shell of the Australian species of pearl oyster (*Pinctada maxima*) is taken in the tropical waters of Australia from Exmouth Gulf in Western Australia to Cairns in Queensland for the manufacture of buttons, knife handles, etc. Live pearl-shell is used for pearl culture, *Pinctada maxima* being capable of producing pearls which are the largest in the world and which command top market prices. Trochus-shell is found mainly on coral reefs off the Queensland coast, although small quantities occur in Western Australia.

### Whales

The Australian whaling industry formerly exploited the baleen (humpback) whales during their winter migrations along the east and west coasts of Australia. However, owing to the total prohibition placed on their capture by the International Whaling Commission in 1963, Australian whaling is now confined to the sperm whale (*Physeter catodon*) which has been taken in the southern waters of Western Australia since 1955. Processing operations were carried out by several shore stations, but now only one station at Albany, Western Australia, is still operating.

### Marine flora

The only substantial commercial collection of seaweed in Australia is undertaken at Triabunna, Tasmania, where a factory is processing seaweed (*Macrocystis pyrifera*) for its alginate content.

### General

A map showing Australia's principal ports and localities of the fishery resources under exploitation appears on plate 49, page 882. Detailed information on the history of the development of fisheries industries in Australia is given in Year Book No. 55, pages 976-7.

## Fisheries administration and research

The Constitution of the Commonwealth (Section 51 (x)) assigns to the Commonwealth power to legislate for fisheries in Australian waters beyond territorial limits, the residual power in respect of waters within territorial limits (including inland waters) resting with the States. The Commonwealth has made similar arrangements for each of its Territories. Each State and Territory has legislation regulating fisheries in waters within its jurisdiction. Persons taking fish for sale, and their boats, are required to be licensed, and provision is made for management of the fisheries.

The Commonwealth laws regulating the fisheries are the *Fisheries Act* 1952-1970, the *Continental Shelf (Living Natural Resources) Act* 1968 and the *Whaling Act* 1960-1966. Each of these applies in accordance with the Commonwealth's fishery power under the Constitution.

### Fisheries Act

This Act requires persons engaging in fishing and boats used for fishing to be licensed and their equipment for taking fish to be registered if the purpose of the fishing is commercial. It also provides for management and conservation of the fisheries. The Act applies to Australian residents and their boats in waters proclaimed under the Act and, since 1968, to foreign boats and their crews in the zone of waters extending 12 miles from the baselines of the territorial sea but excluding waters within territorial limits, where State law applies.

### Continental Shelf (Living Natural Resources) Act

This Act implements in Australian law the sovereign rights, conferred on Australia in respect of the organisms belonging to sedentary species (that is, organisms which, at the harvestable stage, either are immobile on or under the seabed, or are unable to move except in constant physical contact with the seabed or the subsoil) on the continental shelf. The continental shelf comprises the seabed and subsoil of the submarine areas adjacent to the coast but outside the territorial sea to a depth of 200 metres, or beyond that depth where the depth of the superjacent waters admits of the exploitation of the natural resources of the area, by the Convention on the Continental Shelf, Geneva, 1958. The Act requires the licensing of persons searching for and taking sedentary organisms, of boats used to search for and take sedentary organisms, and of persons employing divers, trial divers and divers' tenders in taking sedentary organisms, if such activities are carried out in controlled areas of the continental shelf of Australia or the Territories for a commercial purpose. Provision is made for proclamation of sedentary organisms to which the Act applies, for the establishment of controlled areas of continental shelf in respect of specified sedentary organisms, and for the management and conservation of sedentary organisms in controlled areas (the last of these applying to all persons whether the purpose of the taking of the sedentary organism was commercial or not). The Act applies to all persons including foreigners, and to all boats including foreign boats.



### Whaling Act

This Act implements in Australian law the obligations imposed on Australia by virtue of our adherence to the International Convention for the Regulation of Whaling, Washington, 1946. The Act requires the licensing of factories engaged in treating whales and of ships (and aircraft) used for taking whales. It also provides for the management and conservation of whale stocks.

### Administration

Australian fisheries are administered by the authority having jurisdiction over the waters concerned. In inland waters and in waters within territorial limits, administration is the responsibility of the State or Territory fisheries authority. In proclaimed waters, and on the continental shelf beyond territorial limits, administration is the responsibility of the Commonwealth which, by agreement, has delegated to State fisheries authorities the necessary authorities for day-to-day administration of the Acts.

The administration of the fisheries is directed to a number of objectives, of which the two most important are conservation of the living resources in order to ensure their ability to sustain a maximum yield consistent with economy in their exploitation and the orderly conduct of the fishing industry. Fishery resources are common property and apart from fisheries such as those for rock lobster and abalone, where the numbers of boats and the quantities of fishing gear are controlled, the only other restrictions on the entry of boats into the Australian fishing industry are those relating to foreigners, and to processing and carrying boats in the northern prawn fishery. Management measures have been introduced in several fisheries to provide controls such as minimum sizes, closed areas, closed seasons and regulation of the types of fishing gear that may be used.

The Fisheries Development Trust Account (established under the *Fishing Industry Act 1956*) and the Fishing Industry Research Trust Account (established under the *Fishing Industry Research Act 1969*) are available to support financially projects of kinds consistent with the purposes of those Acts for the development and management of the fisheries and fishing industry. The former is supported by the proceeds of the sale of the assets of the Australian Whaling Commission. The latter is a matching fund into which is paid each year an appropriation from Commonwealth Revenue equal to amounts collected from the fishing industry by the State Fisheries Authorities and expended by the States for the same purposes.

### Research

The main aim of fisheries research in Australia is to provide a background of biological, technical and economic information which will provide guidance for the efficient and rational utilisation of fisheries resources. To this end much of the research already undertaken has been directed at formulating recommendations for management of various fisheries. Research work is also carried out which is expected to lead to the development of new fisheries, the expansion of under-exploited fisheries, greater economy in operations and the use of more efficient equipment and methods.

Organisations in Australia at present engaged in research into fisheries matters are:

- (i) C.S.I.R.O. Division of Fisheries and Oceanography, with its headquarters and main laboratory at Cronulla, N.S.W. (fisheries science and oceanography);
- (ii) C.S.I.R.O. Division of Food Research; main laboratories located at Ryde, N.S.W. (handling, storage, processing and transportation of fish);
- (iii) State fisheries departments (fisheries laboratories have been established in Perth, Hobart, Melbourne, Sydney and Brisbane; new research vessels have been launched by Victoria, New South Wales, Tasmania and Western Australia; the Northern Territory Administration has recently established a Prawn Research Unit in Darwin);
- (iv) Fisheries Division, Department of Primary Industry, Canberra (economic and management research, gear technology, extension and education service); and
- (v) private fishing companies (surveys of fisheries resources, research into handling and processing).

## Collection and presentation of fisheries statistics

### Source and basis of statistics

Statistics presented in this chapter have been collected by a number of authorities. The various State fisheries authorities have supplied, through the Deputy Commonwealth Statisticians in the States, the details of employment, boats, equipment, and production of the general fisheries. The Fisheries division of the Department of Primary Industry has supplied particulars of the whaling



industry and pearl-shell fishery. Statistics of the processing of general fisheries products and of overseas trade in the products of fishing and whaling have been compiled in the Commonwealth Bureau of Census and Statistics.

The statistics refer, in general, to financial years. However, pearl and shell fishing data refer to the season ended in the financial year shown. Whaling statistics are shown by calendar years, and refer to the season in the calendar year. All overseas trade information refers to financial years.

In the preparation of Australian fisheries production statistics the quantities of individual products are generally in terms of the form in which they are taken from the water. For example, the statistics of fish production published in this chapter are in terms of 'estimated live weights' which are calculated from landed weights by using conversion factors for each species in each State. These conversion factors allow for the fact that the quantities of fish reported are frequently in a gutted, headed and gutted, or otherwise reduced condition. Crustaceans are reported on an 'estimated live weight' basis and molluscs (edible) on a 'gross (in-shell) weight' basis. The figures of pearl-shell and trochus-shell refer to the actual quantities of dry shell for sale and exclude the weight of the fish.

Two weaknesses of fisheries statistical collections in Australia to date have been the lack of uniformity, which makes it difficult to compile statistics on an Australia-wide basis, and the lack of data on the effort involved in taking fish (time spent fishing, gear used, etc.). Recognising these weaknesses, the Commonwealth-States Fisheries Conference in 1960 appointed a Statistics Committee 'to examine all aspects of fisheries statistics and fully document a proposed system for submission to the States and Commonwealth for approval'.

#### Model system of catch and effort statistics, 1962

The model system of catch and effort statistics designed by the Committee was adopted by the Commonwealth-State Fisheries Conference in 1962. The new system was introduced in Tasmania in 1963, in Victoria and Western Australia in 1964 and in South Australia in 1969. The system was introduced in Queensland for the otter trawl fishery early in 1965, but there are no definite plans at present to extend it to other fisheries.

Under the new system fishermen are asked to report monthly the various fishing methods used, catch of each species taken and the locality where the greatest proportion of the catch is taken. Fishermen record catch in terms of landed weight, and appropriate conversion factors are used to obtain live weight where this is required. A grid system of 1° rectangles (relating to latitude and longitude) is used for recording location of catches at sea, and estuaries and inland waters are recorded where appropriate. Other data obtained include details of fishing effort, ports at which catch is landed, and employment details.

### Boats and equipment used in fisheries

#### Fish, crustaceans and molluscs (edible)

The boats used for the estuarine fisheries are mostly small vessels, propelled by diesel or petrol engines of low power. The offshore vessels range up to 120 feet in length and are almost invariably powered by diesel engines. Most of them have either insulated holds and carry ice, or are equipped with dry or brine refrigeration. Some rock lobster vessels are fitted with wells in which the catch is kept alive. About 25 per cent of the vessels registered in Australia for commercial fishing are over 30 feet in length. Recently, a number of well equipped, double rigged, prawn trawlers of 60 feet to 85 feet in length have been built for the rapidly developing northern prawn fisheries.

The following are the types of equipment most commonly used in the main fisheries: *mullet*, beach seine, gill net; *shark (edible)*, long-lines, gill net; *Australian Salmon*, beach seine; *snoek*, trolling lines; *flathead*, Danish seine, otter trawl; *snapper*, long-lines, traps, gill net, hand-line; *morwong*, Danish seine, otter trawl, traps; *whiting*, handlines, Danish seine, beach seine, gill net; *garfish*, beach seine; *mackerel*, trolling lines; *tuna*, pole and live-bait, trolling lines (lampara nets and purse seines are used for taking live bait for tuna); *prawns*, otter trawl, beam trawl, beach seine net; *rock lobster*, pots, traps; *scallops*, dredge, otter trawl; and *abalone*, diving using hookah gear.

#### Pearls, pearl-shell and trochus-shell

Ketch-rigged luggers about fifty-five feet long which carry crews of eight to fourteen members are used for pearl-shell fishing in northern Australia.

#### Whaling

The whaling industry is highly mechanised. Standard equipment includes aircraft to locate whales, diesel-powered catchers of about 100 to 125 feet in length, and tow boats.

**Boats and equipment employed by industry**

The following two tables show details of boats and equipment employed in the taking of fish, crustaceans and edible molluscs, pearl-shell and trochus-shell, and the number of chasers and stations engaged in whaling operations. The reservations mentioned below regarding the use of employment information are also applicable to these tables. Boats employed in more than one industry are classified to their main activity.

**FISHERIES: BOATS AND EQUIPMENT EMPLOYED AND WHALING STATIONS OPERATING, STATES AND NORTHERN TERRITORY, 1970-71**

		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Aust.</i>
General fisheries—									
Boats employed . . . . .	No.	2,604	815	1,629	2,162	1,456	529	127	9,322
Value of boats and equipment	\$'000	10,605	7,036	18,604	11,479	19,460	6,858	5,668	79,711
Edible oyster fisheries—									
Boats employed . . . . .	No.	1,699	..	130	..	..	n.a.	..	(a)1,829
Value of boats and equipment	\$'000	1,746	..	(b)98	..	..	n.a.	..	(a)1,844
Pearl-shell and trochus-shell—									
Boats employed(c) . . . . .	No.	..	..	14	..	12	..	2	28
Whaling(c)—									
Chasers . . . . .	No.	..	..	..	..	3	..	..	3
Stations operating . . . . .	„	..	..	..	..	1	..	..	1

(a) Incomplete: see individual States.  
Department of Primary Industry.

(b) Incomplete: figure for value of equipment not available.

(c) Source:

**FISHERIES: BOATS AND EQUIPMENT EMPLOYED AND WHALING STATIONS OPERATING, AUSTRALIA, 1966-67 TO 1970-71**

		1966-67	1967-68	1968-69	1969-70	1970-71
General fisheries—						
Boats employed	No.	8,991	9,354	9,244	(a)8,857	(a)9,322
Value of boats and equipment	\$'000	46,102	51,456	(b)64,072	(b)71,376	(b)79,711
Edible oyster fisheries—						
Boats employed	No.	1,549	(c)1,599	(c)1,788	(c)1,805	(c)1,829
Value of boats and equipment	\$'000	(d)1,127	(e)1,444	(e)1,744	(e)1,741	(e)1,844
Pearl-shell and trochus-shell—						
Boats employed(f)	No.	42	49	33	29	28
Whaling(f)—						
Chasers	No.	3	3	3	3	3
Stations operating	„	1	1	1	1	

(a) Not comparable with 1968-69 and earlier years because of changes in basis of counting in South Australia.  
(b) Not comparable with 1967-68 and earlier years because of changes in methods of valuation in Western Australia.  
(c) Incomplete; figure for Tasmania is not available. (d) Incomplete; figure for value of equipment in Queensland is not available. (e) Incomplete; figures for value of boats and equipment in Tasmania and equipment in Queensland are not available. (f) Source: Department of Primary Industry.

**Employment in fisheries****Persons engaged in fishing activities, 1966 census**

The number of persons whose industry statements were classified to 'fishing' at the 1966 census was 8,021 out of a total of 512,994 in all primary industries and 4,856,455 in the total work force. The census classification 'fishing' includes such activities as fishing, whaling, pearl-shell fishing, oyster-farming, etc. For further information see the chapter Employment and Unemployment, also 1966 Census Bulletin No. 9.6, *Population: By Industry and Occupational Status, Australia*.

**Classification of registered commercial fishermen by industry**

The following two tables are derived mainly from the licensing records of the various State fisheries authorities. Because the definitions and licensing procedures used by these authorities are not uniform the statistics should not be used to compare the relative productivities of fishing industries in the several States. Persons engaged in more than one industry are classified according to their main activity, and so may be classified differently from one year to the next.



## PERSONS ENGAGED IN FISHERIES: STATES AND NORTHERN TERRITORY 1970-71

Industry	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
General fisheries . . . . .	3,975	1,504	3,035	3,243	2,890	1,090	542	16,279
Edible oyster fisheries . . . . .	1,238	..	353	..	5	n.a.	..	(a)1,596
Pearl-shell and trochus-shell(b) . . . . .	..	..	271	..	120	..	25	416
Whaling(b)—								
At sea . . . . .	..	..	..	..	51	..	..	51
Ashore . . . . .	..	..	..	..	48	..	..	48

(a) Incomplete: see individual States. (b) Source: Department of Primary Industry.

## PERSONS ENGAGED IN FISHERIES: AUSTRALIA, 1966-67 TO 1970-71

Industry	1966-67	1967-68	1968-69	1969-70	1970-71
General fisheries . . . . .	12,657	14,965	16,460	(a)15,629	(a)16,279
Edible oyster fisheries . . . . .	1,249	(b)1,319	(b)1,425	(b)1,717	(b)1,596
Pearl-shell and trochus-shell(c) . . . . .	571	538	473	422	416
Whaling(c)—					
At sea . . . . .	45	45	48	51	51
Ashore . . . . .	43	40	32	48	48

(a) Not comparable with 1968-69 and earlier years because of changes in basis of counting in South Australia.  
(b) Incomplete: figure for Tasmania is not available. (c) Source: Department of Primary Industry.

## Production, processing and domestic marketing of fisheries products

## Value of fisheries production

The following table shows the gross value and local value of fishing and whaling production by States. Because the value of materials used in the course of production is not available for all States it is not possible to show a comparison of net values. (See also the chapter Miscellaneous for an explanation of the value terms used.)

FISHERIES: GROSS AND LOCAL VALUE OF PRODUCTION  
STATES AND NORTHERN TERRITORY, 1966-67 TO 1970-71  
(\$'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
GROSS VALUE								
1966-67 . . . . .	10,473	4,980	6,959	6,175	16,525	3,653	82	48,847
1967-68 . . . . .	12,028	5,725	7,309	6,993	21,954	4,473	107	58,589
1968-69 . . . . .	11,517	5,933	8,089	7,683	23,717	4,864	1,191	62,994
1969-70 . . . . .	13,467	5,979	8,034	8,135	19,660	4,043	3,979	63,297
1970-71 . . . . .	15,329	7,310	10,985	9,237	25,127	5,984	4,424	78,395
LOCAL VALUE(a)								
1966-67 . . . . .	8,836	4,307	6,436	5,420	16,469	3,024	82	44,574
1967-68 . . . . .	10,212	5,153	6,896	6,162	21,805	3,668	107	54,003
1968-69 . . . . .	9,984	5,336	7,679	6,773	23,600	4,100	1,191	58,663
1969-70 . . . . .	11,514	5,304	7,609	7,183	19,536	3,343	3,979	58,468
1970-71 . . . . .	13,224	6,462	10,458	8,177	25,028	5,116	4,424	72,888

(a) Local value is gross value less marketing costs.

**Production of selected fisheries**

The following tables show details of the quantities and values of production of selected fisheries in each State and the Northern Territory in 1970-71 and throughout Australia for the years 1966-67 to 1970-71.

**SELECTED FISHERIES PRODUCTS: PRODUCTION AND GROSS VALUE  
STATES AND NORTHERN TERRITORY 1970-71**

<i>Product</i>		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Aust.</i>
<b>QUANTITY</b>									
Fish(a)	'000 lb	35,467	31,990	(b)11,361	17,839	12,339	4,276	426	113,697
Crustaceans(c)	"	5,299	1,720	19,567	7,794	24,147	3,552	9,924	72,002
Molluscs (edible)(d)	"	26,579	15,447	4,271	2,747	4,191	7,767	12	61,013
Pearl-shell(e)	ton	..	..	223.0	..	125.8	..	11.0	(f)593.1
<b>GROSS VALUE (\$'000)</b>									
Fish		5,537	3,277	(b)2,180	2,473	1,200	593	80	15,340
Crustaceans		3,526	1,719	7,119	6,077	21,074	3,507	4,164	47,185
Molluscs (edible)		6,266	2,314	397	686	289	1,836	..	11,789
Pearl-shell(e)(g)		..	..	173	..	97	..	6	(f)392

(a) Estimated live weight. (b) Excludes freshwater fish, particulars of which are not available. (c) Gross weight. (d) Gross (in shell) weight. (e) Source: Department of Primary Industry. (f) Includes manufacturing shell produced from pearl culture operations for which State details are not available for publication. (g) Estimated.

**SELECTED FISHERIES PRODUCTS: PRODUCTION, AND GROSS VALUE  
AUSTRALIA, 1966-67 TO 1970-71**

<i>Product</i>		1966-67	1967-68	1968-69	1969-70	1970-71
<b>QUANTITY</b>						
Fish(a)	'000 lb	98,533	102,603	108,134	121,993	113,697
Crustaceans(b)	"	46,215	54,017	51,158	55,761	72,002
Molluscs (edible)(c)	"	(d)57,527	(e)64,909	(f)42,565	47,671	61,013
Pearl-shell(g)(h)	ton	459.5	494.9	468.3	525.9	593.1
Trochus-shell(g)	"	2.6	1.0	5.8	0.2	25.1
<b>GROSS VALUE (\$'000)</b>						
Fish(i)		12,646	14,179	14,512	15,493	15,340
Crustaceans		24,906	32,755	36,560	34,088	47,185
Molluscs (edible)		(d)6,580	(e)7,859	(f)6,608	8,087	11,789
Pearl-shell(g)(h)		307	271	237	310	392
Trochus-shell(g)		..	..	1	..	4

(a) Estimated live weight. Excludes freshwater fish caught in Queensland. (b) Gross weight. (c) Gross (in shell) weight. (d) Excludes scallops and mussels in Western Australia. (e) Excludes oysters and mussels in Western Australia and oysters in Tasmania. (f) Excludes abalone and oysters in Western Australia. (g) Source: Department of Primary Industry. (h) Includes manufacturing shell produced from pearl culture. (i) Excludes freshwater fish caught in Queensland.

The following tables show details of the production and gross value of the main types of fish, crustaceans, and molluscs caught in each State and the Northern Territory in 1970-71 and throughout Australia for the years 1966-67 to 1970-71.

## Fish

FISH: PRODUCTION, BY TYPE, STATES AND NORTHERN TERRITORY, 1970-71  
(<sup>000</sup> lb estimated live weight)

Type	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Freshwater types—	412	409	n.a.	1,369	..	53	..	(a)2,244
Marine types—								
Tuna . . . . .	(b)8,034	222	71	5,422	1,229	18	..	14,996
Mackerel . . . . .	85	..	1,800	..	99	..	5	1,989
Snoek . . . . .	161	4,999	..	..	..	1,346	..	6,506
Mullet . . . . .	5,814	715	4,125	135	1,365	22	7	12,183
Tailor . . . . .	364	36	696	..	102	..	..	1,199
Bream (including Tar-whine) . . . . .	675	871	480	8	49	1	..	2,084
Australian salmon . . . . .	718	554	..	2,290	3,628	443	..	7,634
Ruff . . . . .	..	47	..	177	1,615	..	..	1,838
Snapper . . . . .	1,642	792	128	784	423	2	..	3,770
Morwong . . . . .	2,119	125	..	..	9	16	..	2,269
Whiting . . . . .	398	664	651	1,884	497	..	3	4,097
Luderick . . . . .	1,299	158	163	..	..	..	..	1,619
Flathead . . . . .	2,968	1,869	147	10	17	152	..	5,162
Shark . . . . .	2,478	6,169	..	4,649	1,034	1,748	21	16,099
Leatherjacket . . . . .	2,022	36	..	..	27	1	..	2,086
Garfish . . . . .	302	432	128	572	60	60	1	1,555
Other . . . . .	5,975	13,892	2,972	538	2,187	415	389	26,368
<i>Total marine</i> . . . . .	<i>35,054</i>	<i>31,580</i>	<i>11,361</i>	<i>16,469</i>	<i>12,339</i>	<i>4,223</i>	<i>426</i>	<i>111,454</i>
<b>Grand total</b> . . . . .	<b>35,467</b>	<b>31,990</b>	<b>(c)11,361</b>	<b>17,839</b>	<b>12,339</b>	<b>4,276</b>	<b>426</b>	<b>113,697</b>

(a) Incomplete; excludes Queensland.  
in Queensland not available.

(b) Source: C.S.I.R.O.

(c) Incomplete: figure for freshwater fish caught

GROSS VALUE OF FISH, BY PRINCIPAL TYPES, 1970-71  
(\$'000)

Type of Fish	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Tuna . . . . .	803	14	4	325	86	1	..	1,234
Snoek . . . . .	57	267	..	..	..	67	..	391
Mullet . . . . .	767	66	410	12	151	3	1	1,410
Australian salmon . . . . .	50	39	..	160	174	34	..	457
Snapper . . . . .	618	230	35	164	68	..	..	1,114
Morwong . . . . .	351	21	..	..	1	2	..	376
Flathead . . . . .	619	293	29	1	2	18	..	962
Shark . . . . .	251	1,326	..	497	150	307	4	2,535
All other species . . . . .	2,021	1,019	(a)1,703	1,312	569	162	74	6,860
<b>Total fish</b> . . . . .	<b>5,537</b>	<b>3,277</b>	<b>(a)2,180</b>	<b>2,473</b>	<b>1,200</b>	<b>593</b>	<b>80</b>	<b>15,340</b>

(a) Excludes freshwater fish, particulars of which are not available.

**FISH: PRODUCTION, BY TYPE, AUSTRALIA, 1966-67 TO 1970-71**  
(<sup>'000</sup> lb estimated live weight)

Type	1966-67	1967-68	1968-69	1969-70	1970-71
Freshwater types(a)	1,184	1,082	1,694	1,494	2,244
Marine types—					
Tuna(b)	12,455	14,998	19,657	18,630	14,996
Mackerel	2,153	2,221	1,755	1,682	1,989
Snoek	5,146	7,307	8,587	9,092	6,506
Mullet	12,460	11,719	11,181	11,622	12,183
Tailor	799	1,362	973	1,142	1,199
Bream (including Tarwhine)	1,692	2,065	1,986	2,063	2,084
Australian salmon	14,898	15,658	9,464	10,503	7,634
Ruff	1,636	1,313	1,812	1,907	1,838
Snapper	3,668	3,548	2,908	3,528	3,770
Morwong	3,772	2,980	2,629	1,879	2,269
Whiting	3,619	3,679	3,838	4,564	4,097
Luderick	1,455	1,486	1,410	1,650	1,619
Flathead	5,848	5,370	6,076	6,158	5,162
Shark	13,322	13,281	15,818	17,070	16,099
Leatherjacket	986	854	814	1,679	2,086
Garfish	1,780	1,659	1,904	1,966	1,555
Other	11,660	12,023	15,628	25,365	26,368
<i>Total marine</i>	<i>97,349</i>	<i>101,522</i>	<i>106,440</i>	<i>120,500</i>	<i>111,454</i>
<b>Grand total</b>	<b>98,533</b>	<b>102,603</b>	<b>108,134</b>	<b>121,993</b>	<b>113,697</b>

(a) Excludes freshwater fish caught in Queensland, particulars of which are not available. (b) Includes estimate by C.S.I.R.O. for New South Wales.

### Crustaceans

**CRUSTACEANS: PRODUCTION, BY TYPE, STATES AND NORTHERN TERRITORY, 1970-71**  
(<sup>'000</sup> lb gross weight)

Type	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Rock lobster(a)	369	1,718	160	5,105	17,861	3,542	..	28,756
Prawns	4,691	1	18,740	2,675	6,179	..	9,905	42,190
Crabs	239	1	667	14	107	9	19	1,055
<b>Total</b>	<b>5,299</b>	<b>1,720</b>	<b>19,567</b>	<b>7,794</b>	<b>24,147</b>	<b>3,552</b>	<b>9,924</b>	<b>72,002</b>

(a) Includes freshwater crayfish caught in New South Wales and Victoria, bay lobster taken in New South Wales, Queensland and Western Australia and *cherax destructor*, commonly known as yabbies taken in South Australia.



## CRUSTACEANS: PRODUCTION, BY TYPE, AUSTRALIA, 1966-67 TO 1970-71

('000 lb gross weight)

Type	1966-67	1967-68	1968-69	1969-70	1970-71
Rock lobster(a)	(b)31,626	(b)33,107	(b)28,883	(c)25,264	(c)(d)28,756
Prawns	13,624	20,101	21,414	29,467	42,190
Crabs	966	809	860	1,031	1,055
<b>Total</b>	<b>46,215</b>	<b>54,017</b>	<b>51,158</b>	<b>55,761</b>	<b>72,002</b>

(a) Includes freshwater crayfish caught in New South Wales and bay lobster taken in Queensland. (b) Includes also freshwater crayfish caught in Victoria. (c) Includes also freshwater crayfish caught in Victoria and bay lobster taken in New South Wales and Western Australia. (d) Also includes *cherax destructor*, commonly known as yabbies taken in South Australia.

## Molluscs (edible)

## MOLLUSCS: PRODUCTION, BY TYPE, STATES, 1970-71

('000 lb gross (in-shell) weight)

Type	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Octopus	..	53	..	134	1	..	..	189
Squid	..	242	115	(a)78	24	7	..	466
Cuttlefish	..	3	..	(b)	..	..	..	3
Oysters	21,255	2	280	5	2	71	12	21,627
Scallops	3,124	9,590	3,876	..	3,897	..	..	20,488
Pipi	..	..	..	19	..	..	..	19
Mussels	131	1,048	..	85	..	..	..	1,265
Abalone	2,068	4,509	..	2,426	266	7,689	..	16,958
<b>Total</b>	<b>26,579</b>	<b>15,447</b>	<b>4,271</b>	<b>2,747</b>	<b>4,191</b>	<b>7,767</b>	<b>12</b>	<b>61,013</b>

(a) Includes cuttlefish. (b) Included with squid.

## MOLLUSCS: PRODUCTION, BY TYPE, AUSTRALIA, 1966-67 TO 1970-71

('000 lb gross (in-shell) weight)

Type	1966-67	1967-68	1968-69	1969-70	1970-71
Octopus	(a)34	(b)18	(b)26	(b)62	189
Squid	(c)369	(d)377	(d)374	(d)561	(e)466
Cuttlefish(b)	..	1	7	10	3
Oysters	16,115	(f)16,636	(g)16,576	20,633	21,627
Scallops	(g)29,923	28,757	11,049	12,237	20,488
Pipi	..	..	..	..	19
Mussels	(g)260	(g)246	119	670	1,265
Abalone	10,825	18,872	(g)14,415	13,499	16,958
<b>Total(h)</b>	<b>57,527</b>	<b>64,909</b>	<b>42,565</b>	<b>47,671</b>	<b>61,013</b>

(a) Excludes production for Queensland and South Australia, which is included with squid. (b) Production for South Australia is included with squid. (c) Includes octopus for Queensland and cuttlefish and octopus for South Australia. (d) Includes cuttlefish and octopus for South Australia. (e) Includes cuttlefish for South Australia. (f) Excludes particulars for Western Australia and Tasmania which are not available for publication. (g) Excludes particulars for Western Australia which are not available for publication. (h) Incomplete, see relevant footnotes.

## Pearls, pearl-shell and trochus-shell

## PEARL CULTURE OPERATIONS: AUSTRALIA, 1966 TO 1970

(Source: Department of Primary Industry)

		1966	1967	1968	1969	1970
Live shell introduced	No. of shells	697,443	783,733	838,622	796,831	444,727
	tons	345.5	427.6	440.1	404.3	177.0
Production of—						
Cultured pearls—						
Round and baroque pearls	No.	105,121	56,653	76,337	77,858	80,445
	momme(a)	63,073	30,061	42,854	44,334	48,314
	\$'000	2,975	1,539	2,499	3,020	2,029
Half pearls	No.	264,012	266,466	522,247	631,476	472,259
	\$'000	621	680	1,165	1,409	606
Manufacturing shell	tons	160.1	168.2	213.4	261.7	233.4
	\$'000	70	80	86	120	116

(a) A momme is a pearl weight measurement equivalent to 0.13 oz (avoirdupois).

PEARL-SHELL AND TROCHUS-SHELL: PRODUCTION  
STATES AND NORTHERN TERRITORY, 1966 TO 1970

(Source: Department of Primary Industry)

(Tons)

	1966	1967	1968	1969	1970
Pearl-shell(a)—					
Queensland	179.6	189.2	137.9	119.5	223.0
Western Australia	103.2	132.7	117.0	137.7	125.8
Northern Territory	16.6	4.8	..	7.0	11.0
Australia	299.4	326.7	254.9	264.2	359.8
Trochus-shell—					
Queensland	2.6	1.0	5.8	0.2	25.1

(a) Excludes manufacturing shell produced from pearl culture operations.

## Whales

## WHALES TAKEN(a): AUSTRALIA, 1967 TO 1971

(Source: Department of Primary Industry)

(Number)

	1967	1968	1969	1970	1971
Male	560	585	637	775	820
Female	27	73	42	24	40
Total	587	658	679	799	860

(a) Sperm whales only were taken.

**Processing of fish, crustaceans and molluscs**

Ice is extensively used for the chilling of fish taken in estuarine and inshore fisheries. Refrigeration is used particularly on vessels operating in the tuna fishery and prawn fisheries to chill or freeze the catch. Refrigerated brine tanks are most commonly used.

Processing plants are located strategically throughout Australia close to fishing grounds. In recent years a number of shore-based plants have been established in remote areas of northern Australia to service the expansion of the prawn fishery. Processing vessels receiving prawns from a fleet of trawlers are also operating in this fishery.

Rock lobsters, prawns and scallops are frozen for export, tuna, snoek, Australian salmon and abalone are canned; small amounts of fish are smoked; some molluscs are bottled. Hand labour is still used extensively in processing operations, but mechanisation is being progressively introduced.

Fish, crustaceans and molluscs intended for export are processed in establishments registered under the Export (Fish) Regulations. Edible fish for local consumption is mainly dispatched fresh iced to markets. A survey of the Australia seafood processing industry was published by the Department of Trade and Industry in 1971.

**FISH PROCESSING (EXCEPT FREEZING): AUSTRALIA, 1966-67 TO 1970-71**  
(<sup>000</sup> lb)

	1966-67	1967-68	1968-69	1969-70	1970-71
Fish used(a)—					
Whole . . . . .	18,782	24,146	25,323	24,652	19,195
Headed and or gutted . . . . .	6,872	7,824	5,181	4,952	3,070
Estimated live weight equivalent, fish used . . . . .	26,700	33,200	31,300	30,400	23,000
Production(b)—					
Canned fish(c)					
Australian salmon . . . . .	6,344	6,736	4,368	5,555	4,239
Tuna . . . . .	5,639	8,193	8,618	8,111	6,108
Other . . . . .	1,818	2,469	1,894	1,952	1,006
Total canned fish . . . . .	13,801	17,398	14,880	15,619	11,352
Smoked fish . . . . .	241	259	175	238	269
Fish paste . . . . .	1,146	1,310	1,194	1,135	1,260
Fish meal(d) . . . . .	1,805	1,714	2,221	3,989	4,441

(a) Fish used for canning (including fish loaf), smoking and the manufacture of fish paste, but excluding the weight of oysters, other shellfish and crustaceans used for canning. (b) Excludes canned rock lobsters, prawns, oysters, and clams, details of which are not available for publication. (c) Includes fish loaf, fish cakes, etc. (d) Excludes whale meat.

**Whale processing**

Oil from sperm whales is used in the manufacture of soap, plastics and watch lubricants, and in automatic transmission systems in motor cars.

**WHALE PROCESSING: AUSTRALIA, 1967 TO 1971**

(Source: Department of Primary Industry)

		1967	1968	1969	1970	1971
Quantity of sperm whale oil produced	barrels(a)	22,428	23,474	26,142	31,686	36,414
Value of whale oil produced . . . . .	\$'000	423	435	607	1,082	1,390
Value of by-products (meal, meat, solubles, etc.) . . . . .	„	282	313	349	481	553
Total value of products . . . . .	„	705	748	956	1,563	1,943

(a) 6 barrels = 1 ton.

### Domestic marketing of fisheries products

Although virtually the whole of the tuna and Australian salmon catches and a large proportion of the snoek catch are canned, the greater part of Australian fish production is marketed fresh or frozen.

Marketing arrangements for fresh fish vary. In New South Wales fish marketing is the responsibility of the Fish Marketing Authority, which operates the Metropolitan and Wollongong Fish Markets. In other coastal centres of New South Wales fishermen's co-operatives may become registered as local fish markets. In Queensland the Fish Board and North Queensland Fish Board sells all production on behalf of fishermen in that State, except for fish intended for export and interstate trade. In Victoria, Western Australia, South Australia and Tasmania there is no restriction on market outlets. In South Australia the great majority of fishermen are members of the South Australian Fishermen's Co-operative Ltd, which handles the whole of their production. Other outlets for fish products include retail and catering establishments.

### Consumption of edible fisheries products

Particulars of the estimated supplies of fish, crustaceans and molluscs available for consumption per head of population, in terms of edible weight, are included in the following table. For the purpose of compiling this table, an allowance has been made for the non-commercial fish catch.

#### FISHERIES PRODUCTS: ESTIMATED SUPPLIES AVAILABLE FOR CONSUMPTION AUSTRALIA, 1966-67 TO 1970-71

(lb edible weight per head per annum)

	1966-67	1967-68	1968-69	1969-70	1970-71
Fresh or frozen—					
Fish—					
Australian origin(a) . . . . .	3.1	3.0	3.4	3.9	3.6
Imported . . . . .	3.3	3.5	3.8	3.6	4.6
Crustaceans and molluscs . . . . .	1.8	2.1	1.3	1.6	2.1
Cured (including smoked and salted) . . . . .	0.6	0.7	1.1	0.9	1.0
Canned—					
Australian origin . . . . .	0.9	0.7	1.1	1.3	1.0
Imported . . . . .	2.4	2.2	2.1	2.0	1.9
Total . . . . .	12.1	12.2	12.8	13.1	14.3

(a) Includes an allowance for non-commercial catch of fish; excludes fish exported.



## Overseas trade in fisheries products

## Edible fisheries products

OVERSEAS TRADE IN EDIBLE FISHERIES PRODUCTS: AUSTRALIA  
1968-69 TO 1970-71

	Quantity ('000 lb)			Value (\$'000 f.o.b.)		
	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
IMPORTS						
Fresh and frozen(a)	52,528	50,270	66,616	13,641	14,274	21,508
Smoked, dried and salted	10,329	6,943	8,390	2,395	2,041	3,128
Potted and concentrated	143	219	214	137	166	210
Canned—						
Herrings	4,429	4,233	5,065	1,136	1,160	1,434
Salmon	10,601	9,857	9,504	6,485	7,387	6,989
Sardines and pilchards	6,101	6,139	5,056	2,411	2,442	2,383
Tuna	278	403	157	100	151	63
Other fish	2,275	2,462	2,646	785	954	1,116
Crustaceans and molluscs	1,841	1,882	1,911	1,474	1,664	1,763
Total canned	25,525	24,976	24,339	12,391	13,758	13,748
Products not elsewhere included	2,886	4,013	4,766	1,930	2,892	3,100
Grand total	..	..	..	30,493	33,131	41,694

## EXPORTS

(Australian produce only; excludes re-exports)

Fresh and frozen(b)—						
Fish	233	970	3,598	88	210	800
Crustaceans and molluscs—						
Rock lobster tails	9,074	8,539	9,822	22,754	19,686	27,333
Prawns	6,383	10,560	14,583	7,405	12,135	16,930
Other	4,130	3,951	4,901	2,916	3,278	4,488
Boiled and frozen crustaceans and molluscs	904	967	730	1,139	1,193	889
Prepared and preserved—						
Fish	348	479	1,212	152	202	545
Crustaceans and molluscs	4,101	3,548	5,054	2,170	1,992	4,546
Products not elsewhere included	125	159	140	275	280	84
Grand total	..	..	..	36,899	38,976	55,615

(a) Excludes frozen smoked, which is included in item Smoked, dried, etc. (b) Excludes frozen smoked, which is included in item Products not elsewhere included.

## Pearls

Pearls valued at \$832,000 were imported into Australia in 1970-71 (\$667,000 from Papua New Guinea and \$139,000 from Japan) compared with imports valued at \$436,000 in 1969-70 (\$201,000 from Japan, \$199,000 from Papua New Guinea).

Cultured pearls exported from Australia in 1970-71 (excluding re-exports) were valued at \$2,107,000 compared with exports valued at \$2,589,000 in 1969-70, the bulk of the exports each year being shipped to Japan. The value of natural pearls exported from Australia in 1970-71 (excluding re-exports) was \$18,000 compared with \$24,000 in 1969-70, the major proportion being shipped to Japan.

**Pearl, etc., shell**

Of the pearl-shell exported in 1970-71, exports valued at \$207,000 were consigned to the Federal Republic of Germany, \$112,000 to Papua New Guinea, \$99,000 to Japan and \$73,000 to Italy.

**OVERSEAS TRADE IN SHELLS: AUSTRALIA, 1968-69 TO 1970-71**

	Quantity ('000 lb)			Value (\$'000 f.o.b.)		
	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
Imports . . . . .	141	107	185	38	36	58
Exports(a)—						
Pearl-shell . . . . .	1,240	1,479	1,348	456	574	601
Other shell (including trochus) . . . . .	119	215	170	11	17	24
<b>Total exports . . . . .</b>	<b>1,359</b>	<b>1,694</b>	<b>1,518</b>	<b>467</b>	<b>591</b>	<b>625</b>

(a) Australian produce only; excludes re-exports.

**Marine animal oils**

Of the whale oil exported in 1970-71, about 67 per cent was exported to the United Kingdom, the remainder going to the United States of America and the Federal Republic of Germany.

**OVERSEAS TRADE IN MARINE ANIMAL OILS: AUSTRALIA, 1968-69 TO 1970-71**

	Quantity ('000 gal)			Value (\$'000 f.o.b.)		
	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
Imports—						
Whale oil from—						
Japan . . . . .	703	292	834	390	193	751
Norway . . . . .	2	482	..	1	309	..
South Africa . . . . .	16	43	39	11	37	40
United Kingdom . . . . .	34	23	30	34	25	43
Other countries . . . . .	3	3	..	3	4	..
<b>Total whale oil . . . . .</b>	<b>758</b>	<b>843</b>	<b>903</b>	<b>440</b>	<b>568</b>	<b>834</b>
Cod liver oil . . . . .	83	68	76	74	83	118
Unrefined fish oils . . . . .	110	114	157	63	79	129
Other . . . . .	16	22	5	14	23	9
<b>Total imports . . . . .</b>	<b>967</b>	<b>1,047</b>	<b>1,141</b>	<b>591</b>	<b>753</b>	<b>1,090</b>
Exports(a)—						
Whale oil . . . . .	1,315	997	1,876	502	492	1,405
Other . . . . .	..	1	1	1	1	1
<b>Total exports . . . . .</b>	<b>1,315</b>	<b>998</b>	<b>1,877</b>	<b>503</b>	<b>493</b>	<b>1,406</b>

(a) Australian produce only; excludes re-exports.

## CHAPTER 26

### MINERAL INDUSTRY

Further detailed statistics and information on the subjects dealt with in this chapter are contained in the annual printed bulletin *The Australian Mineral Industry—Annual Review* and other publications issued by the Bureau of Mineral Resources, Geology and Geophysics, which also issues, in conjunction with this Bureau, a quarterly publication, *The Australian Mineral Industry* (10.17), comprising two parts—Part 1—Quarterly Review and Part 2—Quarterly Statistics. The annual mimeographed statistical bulletins *Mining Establishments* (10.48) (replacing the former *Mining and Quarrying*), *Mineral Production* (10.51) (replacing the former *Minerals and Mineral Products*), *Mineral Exploration* (10.46), and *Overseas Participation in Australian Mining Industry* (10.42) of this Bureau contain economic statistics of the industry prepared and published as soon as possible after the data have been compiled. A monthly statistical bulletin *Minerals and Mineral Products* (10.19) is issued also, and other current statistics on mining or mine products are contained in the *Quarterly Summary of Australian Statistics* (1.3), the *Monthly Review of Business Statistics* (1.4), the *Digest of Current Economic Statistics* (1.5), and the *Monthly Bulletin of Production Statistics* (12.14).

#### GENERAL

##### Geology

##### General geology

Most of the western and central part of the Australian continent consists of basement rocks of Precambrian age. Younger Palaeozoic rocks, mostly of geosynclinal origin, form a discontinuous belt several hundred miles wide extending from north Queensland to Tasmania. Mesozoic platform sediments form a broad zone separating the Palaeozoic and Precambrian rocks and extending from the Gulf of Carpentaria to central New South Wales. Cainozoic rocks occur mainly in Victoria, south-western New South Wales and southern South Australia, and as residual basalt cappings over extensive areas of the Palaeozoic rocks of eastern Australia.

##### Economic geology

Minerals of economic significance occur widely throughout the Precambrian and Palaeozoic rocks of the continent. Palaeozoic mineralisation is perhaps more varied, but the Palaeozoic deposits now being worked are in general smaller than those found in Precambrian rocks. Most of Australia's metallic mineral deposits occur within two broad regions, a region of Precambrian rocks in the west and central areas of the continent and a region of younger Palaeozoic rocks in the east.

The major deposits of metallic ore minerals, including those of iron, lead, zinc, silver, copper, uranium, nickel, and gold, are contained in the Precambrian rocks of the Australian shield. Smaller deposits of ores of tin, tungsten, tantalum, beryllium, manganese, cobalt, and mica are also contained in these rocks.

The mineralised Palaeozoic rocks contain major deposits of gold, now mostly worked out, and a few large copper and lead-zinc-silver ore occurrences. Smaller amounts of ores of tin, tungsten, molybdenum, bismuth, antimony, and ores of other metals also occur in these rocks.

Outside these two main categories, however, there are some metallic mineral deposits of considerable economic importance which were formed during the Tertiary Period. These include bauxite (the ore of aluminium) which occurs as a surface capping over rocks of various ages. Extensive deposits of bauxite occur at Weipa on Cape York peninsula in north Queensland, at Gove on the north-eastern tip of the Northern Territory, in the Darling Range in Western Australia, and near Kalumburu in the north-west of Western Australia. These deposits are the result of a long period of weathering and reworking.

Other important deposits which are the results of weathering are the lateritic nickel deposits at Greenvale and Rockhampton in Queensland, and in the Kalgoorlie and Wingellina areas of Western Australia. Mineral sands, another important exception, contain rutile and ilmenite (ores of titanium), zircon (zirconium ore), monazite (thorium ore), and other minerals, and are particularly well developed on the central and northern New South Wales coast, southern Queensland and south-western Western Australia. The deposits of the eastern States are considered to be final derivatives of Mesozoic rocks. The Western Australian deposits are thought to be derivatives of the Precambrian granites of the Australian shield.

Occurrences of fuel minerals (coal, oil and natural gas) are characteristically located in former sedimentary basins. Large areas of Australia are covered by these basins, and more than twenty major sedimentary basins have been identified on the Australian mainland. In addition, sedimentary basins are known to exist in off-shore areas adjacent to the Australian coast. The individual basins range in area from 4,000 to 680,000 square miles and contain marine and continental sedimentary rocks ranging in maximum thickness from 1,000 to about 30,000 feet and including rocks of all ages from Proterozoic to Tertiary.

The main Australian deposits of black coal are in eastern Queensland and New South Wales. Most are Permian in age, and they predominantly have a bituminous rank; both coking and non-coking types occur. The extensive brown coal deposits of Victoria were formed during the Tertiary Period and are used to produce electricity for that State.

Crude oil and natural gas have been found in a number of sedimentary basins. In the Bowen-Surat Basin, Queensland, commercial deposits of oil exist at the Moonie and Alton fields, and commercial deposits of natural gas exist in the Roma, Surat and Rolleston areas. Gas from the Roma area is used to supply Brisbane. Gas reserves are present in the Adavale Basin at Gilmore, and in a dozen or so accumulations in the Cooper Basin which extends from South Australia into Queensland and the Northern Territory. In general the oil reservoir rocks in Queensland are of Lower Jurassic age, and the gas reservoir rocks are of Mesozoic and Permian age. In the Gippsland Basin, off-shore from Victoria in Bass Strait, oil in considerable quantities was discovered in the Kingfish and Halibut fields and recent indications are that the Mackerel field will also be included; oil and natural gas in the Marlin and Barracouta fields; and natural gas in the Snapper field. In the same basin, significant deposits of hydrocarbons were encountered in the Flounder, Tuna, Bream, and Emperor prospects. In the Gippsland Basin, the Cretaceous and Tertiary strata are the reservoir rocks. Eastern Victoria and Melbourne are now supplied with gas from Marlin and Barracouta fields. Oil is being piped from Kingfish, Halibut and Barracouta. In the Cooper Basin, South Australia, commercial deposits of natural gas were discovered at Gidgealpa and Moomba, and also at Daralingie, Toolachee, Merri-melia, Della, Strzelecki, Mudrangie, Moorari, Coonatie, Fly Lake and Big Lake, and gas and oil at Tirrawarra, Moorari and Fly Lake. The reservoir rocks are of Permian age and plans to supply Sydney and some large towns in New South Wales with gas from the Cooper Basin by 1974 are well advanced. In the Carnarvon Basin, Western Australia, commercial crude oil mainly in the Cretaceous formations, and also to a lesser degree in the Jurassic, was discovered at Barrow Island. Off-shore, on the northwest continental shelf, major gas deposits have been discovered at Scott Reef, Rankin, Goodwyn, Angel and North Rankin and oil was discovered at Rankin and Legendre, which are at present, non-commercial. Further south, in the Perth Basin, natural gas in commercially significant quantities was discovered in the Yardarino, Gingin, Dongara and Mondarra areas, the reservoir rocks being of Lower Jurassic, Lower Triassic and Permian ages. Perth is now supplied with natural gas from the Dongara and Mondarra fields and this will also be piped to the large towns. A more recent discovery is in the Walyering area. In the off-shore Bonaparte Gulf Basin high pressure natural gas was encountered at the Petrel and Tern prospects. In the Amadeus Basin, Northern Territory, natural gas was discovered in commercial quantities in formations of Ordovician age at Mereenie and Palm Valley. These are not yet being exploited but several proposals are under consideration. The gas accumulation in the Mereenie Anticline is underlain by the oil column in the same Pacoota Sandstone reservoir.

Of the non-metallic minerals, many occur in, or were formed from, rocks of various ages. The most important are asbestos, clays, sand and gravel, limestone, gypsum, and silica. Salt won by evaporation of sea water is another important product.

Opals are found in the flat-lying sedimentary beds of the Great Artesian Basin in Queensland, New South Wales and South Australia. These opal deposits were formed during the Tertiary Period.

A table showing most of the larger mineral deposits now being mined in Australia according to the age of the geological formation in which they are found is shown in Year Book No. 53, page 1062





### Mineral resources

Australia is self-sufficient in most minerals of economic importance and much more than self-sufficient in some. The following table summarises, in a general way, known reserves and production of the principal metals and minerals in relation to Australian consumption of these commodities and present export availability. Many qualifications are necessary to a simple summary of this kind, and the table should be read in conjunction with the following detailed notes on principal minerals.

#### RESERVES OF MINERALS: AUSTRALIA

(Source: Bureau of Mineral Resources, Geology and Geophysics)

<i>Production</i>	<i>Reserves adequate</i>	<i>Reserves uncertain</i>	<i>Reserves negligible</i>
Production sufficient for domestic demand and exports	Asbestos (chrysotile) Barite Bauxite Bismuth Cadmium Coal (black) Copper Gold Gypsum Iron ore Lead Manganese ore (metallurgical) Mineral sands(a) Nickel Opal Salt Silver Tin Tungsten Zinc	Antimony Beryl Glass sands Talc Tantalite	
Production sufficient for domestic demand	Clays (except light grade china clay) Coal (brown) Dolomite Felspar Limestone	Natural gas Sillimanite	
Production not sufficient for domestic demand	Lithium minerals Phosphate rock Sulphides (as source of sulphur)	Abrasives Arsenic Bentonite China clay Chromite Cobalt Crude oil Diatomite Fluorite Magnesite Manganese ore (chemical) Mercury Mineral pigments Molybdenum Platinum	
Production nil	Magnesium Potassium salts Vanadium	Asbestos (crocidolite) Diamonds Graphite Vermiculite	Borates Nitrates Sulphur

(a) Ilmenite, monazite, rutile, zircon.

### Individual minerals

**Bauxite.** As a result of recent discoveries at Weipa, Queensland, Gove, Northern Territory, in the Darling Range, Western Australia and in the Kimberley area, Western Australia, Australia's reserves of bauxite are known to be very large, perhaps the largest in the world. Total reserves at Weipa are believed to be in excess of 3,000 million tons, while the deposits at Gove are reported to contain up to 250 million tons of bauxite. In the Darling Range, reserves of economic grade bauxite are estimated to be about 1,000 million tons spread over several locations. Another significant deposit of over 200 million tons has so far been proved in the Mitchell Plateau area in the Kimberley District of Western Australia.

**Coal.** Australia has coal resources adequate to provide for future domestic requirements and a substantial export surplus. These resources include coal of all types, except pure anthracite. Australia's coal reserves are concentrated mainly in the mainland eastern States. The bituminous coal is located mainly in New South Wales and Queensland; Victoria has very substantial brown coal reserves in the Latrobe Valley. An inventory of Australian coal resources at December 1970 was published in September 1971 by the Bureau of Mineral Resources in the *Australian Mineral Industry—Quarterly Review* vol. 23, no. 4.

**Copper.** The principal deposit of this metal is at Mount Isa, Queensland where ore reserves were estimated at 130 million tons in 1971. Other important deposits are situated at Cobar, New South Wales, Mount Morgan, Queensland, Mount Lyell, Tasmania, Kanmantoa, South Australia and Tennant Creek, Northern Territory.

**Crude oil.** Recent exploration and development activity indicates that Australia has substantial reserves of crude oil and that additional reserves may be discovered in the near future as exploration activity finds further drilling prospects, particularly in the off-shore areas. The Moonie and Alton fields in Queensland, and the Barrow Island field in Western Australia have been producing since 1964, 1966 and 1966 respectively. The Barracouta, Halibut and Kingfish fields in the off-shore Gippsland Shelf area in Victoria commenced production in 1969, 1970 and 1971 respectively. At the end of 1971, recoverable reserves in Australia were estimated to be 1,854 million barrels and the recent discoveries indicate the possibility of an upward revision of this figure in the near future.

**Gold.** Australia's gold resources are heavily concentrated in Western Australia, mainly in the Kalgoorlie-Coolgardie area, but small deposits of gold-bearing ore occur in all States. In addition, gold is commonly obtained as a by-product of other mining activities, particularly copper mining. Economic gold ore reserves at Kalgoorlie were estimated at 3.8 million tons in late 1970, with an average gold content of 4.19 dwt per ton.

**Iron ore.** In recent years very extensive deposits of iron ore have been discovered in Australia. These discoveries have established Australia as one of the most important iron ore provinces in the world. The largest deposits are located in the Hamersley and Ophthemia Ranges of north-west Western Australia. Other commercially important deposits of iron ore are situated in the Savage River area of Tasmania, in the Middleback Ranges of South Australia, in the Mount Goldsworthy area, and at Yampi Sound, Koolyanobbing, and Koolanooka in Western Australia, and at Mount Bunday and Frances Creek in the Northern Territory. These deposits are adequate to supply the estimated needs of the Australian iron and steel industry far into the future, as well as providing a large export availability. Total Australian reserves with an iron content greater than 50 per cent are estimated to be more than 20,000 million tons.

**Lead-zinc.** Australia has been a major producer of lead and zinc since the discovery of ore at Broken Hill, New South Wales in 1883. Measured reserves of lead-zinc ore at Broken Hill are currently 16.5 million tons assaying 11 per cent lead and 11 per cent zinc. Reserves at another major producing mine, Mount Isa in Queensland, are 55 million tons assaying 7 per cent lead, 6 per cent zinc. Preparations are now being made to start production from a new mine near Mount Isa with reserves of 35.0 million tons of ore, assaying 8 per cent lead and 10 per cent zinc. The capacity of the mine at Rosebery in Tasmania (reserves of 9.1 million tons, 5 per cent lead and 16 per cent zinc) is being increased. Development of the McArthur River deposit in Northern Territory (reserves of 200 million tons, 4 per cent lead and 9 per cent zinc) is dependent on the solution of complex metallurgical problems. During 1970, a new deposit was discovered near Tarago, near Goulburn, N.S.W.; reserves are initially estimated at 7 million tons assaying 3.3 per cent lead, 9.4 per cent zinc and 2.9 per cent copper. Reserves also exist at Cobar, New South Wales, Beltana, South Australia, and Brown's Prospect and Woodcutters, Northern Territory.

**Manganese.** Australia's known reserves of manganese, which is highly important for the iron and steel industry, are in excess of domestic requirements, and exports have increased sharply in recent years. The principal deposits currently being worked are in the Pilbara area of Western Australia and on Groote Eylandt in the Gulf of Carpentaria. Reserves on Groote Eylandt are substantial and supply 78 per cent of Australian production.

*Mineral sands.* Ores of titanium (rutile and ilmenite), zirconium (zircon) and thorium (monazite) occur in mineral sands over extensive areas of the north and central coasts of New South Wales, the south and central coasts of Queensland, and the south-western coast of Western Australia and at Eneabba, 170 miles north of Perth. Resources are large by world standards and easily workable. Australia's reserves of rutile and zircon represent a large proportion of the world's reserves of these minerals. In 1970 Australia was responsible for about 90 per cent of the world's supplies of rutile, 85 per cent of zircon, 50 per cent of monazite and 25 per cent of ilmenite. With the cessation of rutile mining operations in Sierra Leone, Australia is now supplying about 98 per cent of the world requirements.

*Natural gas.* Significant discoveries of natural gas have been made throughout Australia, the most notable being the Barracouta, Marlin, and Snapper fields with combined reserves of 8.5 U.S. trillion cubic feet, at least a dozen fields in the Cooper Basin in South Australia with cumulative recoverable reserves in excess of 3 U.S. trillion cubic feet, and numerous small fields in the Roma, Surat and Rolleston areas in Queensland with combined reserves of 350 U.S. billion cubic feet. Commercial production is being undertaken from the Barracouta, Marlin, Gidgealpa, Moomba, Dongara, Mandarra and Roma fields. Total daily gas production at the end of 1971 was of the order of 238 million cubic feet. To these fields must be added the significant discoveries at Yardarino and Gingin in Western Australia. Reserves of 1.6 U.S. trillion cubic feet at Mereenie and Palm Valley in the Northern Territory are not yet being exploited. Large reserves of natural gas have been discovered on the north-west continental shelf at Petrel, Scott Reef, North Rankin, Rankin, Angel and Goodwyn. At the end of 1971, the total reserves of natural gas in Australia, excluding Papua New Guinea, were estimated at 14.1 U.S. trillion cubic feet.

*Natural gas liquids.* The production of natural gas liquids in association with natural gas is becoming an important facet of Australian petroleum production. Natural gas liquids, also known as condensate, are produced in association with gas from the Barracouta, Marlin, Gidgealpa and Moomba fields and to a lesser degree at Roma. Natural gas liquids from Barracouta and Marlin are separated from the gas at the Longford gas and crude stabilisation plant and piped to Westernport Bay for shipment to local and export markets. As yet, the liquids extracted from the Gidgealpa and Moomba gas are not used commercially. The liquids produced at Roma, because of their small quantity, are mainly used as a fuel on the producing fields. At the end of 1971, reserves of natural gas liquids in Australia, excluding Papua New Guinea, were estimated to be 300 million barrels.

*Nickel.* In the Kalgoorlie-Widgiemooltha area of Western Australia more than 21 nickel sulphide ore bodies have been found since the original discovery of nickel ores was made at Kambalda by Western Mining Corporation. Total ore reserves in the Kalgoorlie area are more than 27 million tons, averaging 3.0 per cent nickel. Other large but low-grade ore bodies have been found between Leonora and Wiluna; the largest of these is Mount Keith where ore reserves are estimated to be 250 million tons averaging 0.6 per cent nickel. A recent discovery in the Leonora-Wiluna area was made at Agnew where the ore body is estimated to contain at least 9 million tons of ore averaging 2 per cent nickel.

A nickel refinery has been built at Kwinana, Western Australia, with an annual capacity of 15,000 tons which is expected to be expanded to 20,000 tons. A smelter is being built at Kalgoorlie with an annual capacity of 20,000 tons of nickel metal and is expected to be in operation by 1973.

Lateritic nickel deposits have been discovered at Greenvale in Queensland where development work has started. Other large, but at present uneconomic, deposits of this type have been found at Wingellina, near the border of South Australia and Western Australia, at the Ora Banda district north-west of Kalgoorlie and at Marlborough in Queensland.

*Phosphate.* Accelerated search for phosphate rock commencing in late 1964 resulted in the discovery of major deposits in north-west Queensland and in the Northern Territory with reserves exceeding 2,600 million tons. It is unlikely that these will be developed in the near future.

*Tin.* The main deposits of tin now being exploited are in the Herberton field inland from Cairns, Queensland; north-west and north-east Tasmania; in the Pilbara region and in the south-west of Western Australia; and at Gibsonvale, Ardlathan and in the New England area, in New South Wales. As the result of exploration and expansion of known deposits in recent years, Australia is now a net exporter of this metal.

*Tungsten.* The main deposits of tungsten ores are in north-eastern Tasmania (wolfram) and on King Island (scheelite). Australia's own requirements are small, and production is principally for export.

*Uranium.* In 1971, following the discovery of large deposits of uranium ore in the Northern Territory, the Minister for National Development announced that the Government would maintain a system of control of exports of uranium from Australia which would not involve quantitative restrictions for the present. A close watch would be kept on proven reserves and the amount exported



to ensure that adequate supplies are retained for future requirements. Appropriate safeguards to ensure that the exported materials are used for peaceful purposes only, is mandatory. Mary Kathleen Uranium Ltd has contracts to export 3,800 tons to be delivered between 1975 and 1981. The mine at Rum Jungle has now closed down. During 1970, three large deposits were discovered in the East Alligator River area of the Northern Territory. Preliminary estimates suggest that two of the deposits could each contain more than the total of previously known uranium reserves in Australia. Further work is being carried out at Nabarlek, Jim Jim and Ranger 1; preliminary estimates suggest that at least 100,000 short tons of uranium oxide will be proven in these deposits. Discovery of a large deposit near Wiluna, Western Australia was announced in 1971 but reserves have not been determined. Other important areas of exploration are Mount Painter and Lake Frome in South Australia, South Alligator River in the Northern Territory and the Westmoreland and Mount Isa areas of Queensland.

### Administration

For all practical purposes all mineral rights in Australia are vested in the Crown. In the States, sovereign rights are held by the State Governments with respect to mineral resources within their boundaries. In the Territories of the Commonwealth these rights are vested in the Commonwealth Government. The Commonwealth Government is able also to influence over-all development and production activity in the mineral industry by virtue of its statutory powers with respect to international trade, customs and excise, taxation, and loan raisings. Certain specially formed bodies such as the Joint Coal Board and the Australian Atomic Energy Commission have been given administrative responsibility in defined areas.

#### Control of mining

Each State or Territory in the Commonwealth has its own mining Acts or Ordinances and regulations governing the prospecting for and working of mineral deposits. These Acts, etc. are similar in principle, but differ in detail. They all make provision for miners' rights to prospect and for small mining leases for mineral production. The principles embodied in these Acts, etc. were established many years ago when mining operations were generally small scale and labour-intensive. Although amendments have been enacted to modernise the legislation, it is generally inadequate for the large scale capital-intensive operations often involved with modern mineral development. For this reason a large enterprise may take the course of acquiring mining titles by negotiation with the appropriate Minister for Mines and having the agreed terms and conditions embodied in an Act of the State Parliament. This method of acquisition has been used in several cases where the leasing company undertook an obligation (such as the erection of a large treatment works) in return for leases over large areas for a long period, and has become more common in recent years (e.g. iron ore in Western Australia, coal and bauxite in Queensland, bauxite in the Northern Territory).

In January 1971 a Committee of Enquiry reported to the Western Australian Government on means of bringing the *Mining Act*, 1904 up to date. In April 1971 the Premier announced that the Western Australian Government intended to implement the recommendations of the Committee of Enquiry. A new Mining Bill has been introduced into Parliament but, at May 1972, had not been passed. The Queensland Parliament passed a new Mining Act in 1968 which was simpler but more suited to modern conditions than the *Mining Act* 1897 to 1967. The 1968 Act became operative on 1 January 1972. A new Mining Act for the same purpose was passed by the South Australian Parliament on 9 December 1971 but has not yet come into operation.

AREAS OCCUPIED UNDER MINING ACTS AND ORDINANCES(a)  
STATES AND NORTHERN TERRITORY, 31 DECEMBER 1967 TO 1971  
(\*000 acres)

Year	N.S.W.(b)	Vic.	Qld(c)	S.A.(b)	W.A.	Tas.	N.T.(b)	Total
1967 . .	1,177	74	2,304	98	372	60	37	4,121
1968 . .	1,146	615	2,618	99	705	66	43	5,290
1969 . .	1,397	626	2,607	97	1,471	54	93	6,345
1970 . .	1,495	2,319	3,568	121	5,512	60	97	13,172
1971 . .	1,148	1,249	3,926	130	7,820	62	46	14,381

(a) Excludes areas held under special arrangements; see following text.  
under miners' rights and dredging claims.

(b) At 30 June.

(c) Excludes lands held

### Control of exploration

This section refers in general to the exploration for all types of mineral deposits in Australia. Additional information relating to the search for petroleum is set out in the following section.

As a result of the introduction of large-scale modern prospecting methods (particularly air-borne prospecting), the small prospecting areas referred to in the previous section were found to be unsuitable in some instances, and steps have been taken in the States and Territories to ensure the availability of large areas for prospecting by interested persons. Large areas may be made available by provision within the Mining Acts or Ordinances for the issue of authorities to prospect over an area defined by a written agreement which also sets out provisions as to the amount of money to be spent, methods of prospecting, tenure of the agreement, etc.

The tenure of such areas is limited, usually to one or two years only, and, if renewed for a further period, is only over an area selected from the larger area as a result of work done during the life of the initial agreement. It does not give the holder any rights over, or authorities to prospect on, land already held under a mining title within the agreed area. Unless specifically stated in an agreement, the discovery of minerals, whether inside or outside an area covered by an authority to prospect, gives the discoverer no legal rights except the right to apply for a mining lease over the area in which the discovery was made. Suitable prospects are converted to mining tenements by making application for lease under the appropriate mining Act.

### Control of petroleum exploration

*On-shore.* In Australia all petroleum is the property of the Crown. Consequently, full control of petroleum mining rights is vested in the Government or Administration of each State or Territory. Any company, organisation or individual proposing to undertake petroleum exploration or development must first satisfy the Government concerned that the necessary financial and technological resources are available to carry out the operation.

There are three main types of petroleum titles:

- (a) the permit, covering initial geological, geophysical and exploration drilling;
- (b) the licence (in Victoria only), which covers detailed surveys and drilling; and
- (c) the lease, which covers development operations and production.

Further details of the petroleum legislation are given in Year Book No. 55, pages 996-7. The States of Western Australia and South Australia recently issued some revisions to their on-shore legislation, for details of which direct reference should be made to the State concerned.

*Off-shore.* The *Petroleum (Submerged Lands) Act 1967-1968* is the instrument whereby the control and safeguarding of the exploration and exploitation of petroleum resources on the territorial sea-bed and on the continental shelf are assured. Complementary legislation has been passed by each State Government and by the Federal Government.

The legislation provides for a two-stage system of titles: the exploration permit, which covers all forms of exploration including drilling, and the production licence, which covers development and exploration. Royalty is generally shared between State and Federal Governments on a 60 : 40 basis; however, overriding royalty is payable to the State under certain conditions. Mineral royalty receipts of Governments under these Acts are included in the table on page 903. For full details of the off-shore legislation, see Year Book No. 55, pages 997-8.

The table following shows details of areas occupied under both on-shore and off-shore petroleum exploration and development titles at 31 December 1970 and 1971.

AREAS OCCUPIED UNDER PETROLEUM EXPLORATION AND DEVELOPMENT  
TITLES: STATES AND NORTHERN TERRITORY, 31 DECEMBER 1970 AND 1971  
(<sup>0</sup>000 acres)

Year	N.S.W.	Vic.	Qld	S.A.(a)	W.A.	Tas.	N.T.(a)	Total
ON-SHORE AREAS (square miles)								
1970	87,886	253,080	506,118	233,526	n.a.(b)	639	61,769	n.a.
1971	75,732	184,910	397,484	219,966	n.a.(b)	230	577,434	n.a.
OFF-SHORE AREAS (5 minute blocks) (c)								
1970	643	1,189	2,918	3,425	8,808	2,314	3,626	22,923
1971	782	1,178	2,918	3,089	8,727	1,703	3,534	21,931

(a) At 30 June. (b) Available only in terms of 5 minute blocks of which there were 5,517 at 31 December 1970 and 6,510 at 31 December 1971. (c) Area bounded by 5 minutes of latitude and 5 minutes of longitude; figures include partial blocks.

### Mineral royalties

The collection by governments of royalties for the production of minerals within their area of authority is an internationally accepted practice. In Australia the responsibility for mineral royalties is largely a State concern, and all States currently collect some form of mineral royalty payments. In the past most States have relied on an established system of standard rates which were uniform for all producers of any particular mineral in the State concerned. These charges were either a fixed monetary amount per ton (e.g. 5c per ton on gypsum mined in New South Wales) or an *ad valorem* royalty (e.g. 1.5 per cent of gross value of gold produced in New South Wales).

In recent years there has been an important basic change in the system of establishing royalty commitments, and it is now quite common for State Governments to negotiate special royalty rates with companies which are seeking mineral leases for large scale developments. These royalty rates may vary, depending on whether production is for export or for domestic processing. The rates for a particular mineral may also vary between producers. Important examples of this type of royalty agreement are the iron ore development agreements in Western Australia and coal development agreements in Queensland. Mineral royalties received by Governments in recent years are shown in the table below.

MINERAL ROYALTY RECEIPTS: GOVERNMENTS, 1966-67 TO 1970-71  
(\$'000)

	1966-67	1967-68	1968-69	1969-70	1970-71
New South Wales(a)	16,807	11,685	9,795	13,558	17,819
Victoria(b)	598	663	(c)687	(c)2,736	(c)12,239
Queensland(a)	2,355	1,844	1,688	3,039	5,483
South Australia	1,092	1,037	1,254	1,557	1,798
Western Australia	2,640	6,238	11,001	15,700	22,347
Tasmania(d)	87	87	(e)251	(e)424	(e)410
Northern Territory	111	291	283	449	431
Commonwealth	10	9	(c)11	492	(c)5,024
Total	23,699	21,853	24,971	37,953	65,552

(a) Includes royalty on sand and gravel from Crown lands. (b) Includes royalty on brown coal paid by State Electricity Commission. (c) From 1968-69 includes royalties received under the *Petroleum (Submerged Lands) Act*, 1967-68. (d) Includes rent and fees from mineral lands. (e) From 1968-69 includes royalties on iron ore.

### Control of exports

The Commonwealth Government maintains export controls over certain minerals and metals. These controls are enforced by means of Customs (Prohibited Exports) Regulations as amended from time to time by Statutory Rules. The Commonwealth authorities having jurisdiction over mineral and metal exports, together with the relevant products, are listed below. A clearance to export is needed in each case.

*Department of National Development*—iron ores, beneficiated iron ores and iron concentrates; mineral sands (whether treated or untreated), and concentrates of mineral sands, containing zircon, rutile or ilmenite; manganese ores; beryllium ores and concentrates; tin ores and concentrates, refined tin in the form of ingots or in any other refinery form, and any of the following materials from which tin may be obtained, being materials resulting from the refining of tin, that is to say residues, slag, dross, dust and other wastes; copper matte, blister copper, copper scrap, copper refinery shapes; copper alloys in the form of ingots, billets, etc.; copper alloy scrap; any of the following materials from which copper may be obtained, that is to say, residues, speiss, slag, dross, scale sweepings, ash, sludge, slime, dust and wastes; and natural gas.

The Minister for National Development announced on 20 January 1970 that the export of natural gas would be subject to control in order to conserve supplies for local use. Export will be permitted only from fields remote from significant local markets. On 24 February 1971 the Ministers for National Development and Customs and Excise announced the introduction of minimum export price controls for zircon.

*Department of Primary Industry*—phosphate rock, phosphate and superphosphate, and fertilisers containing phosphate or superphosphate.

*Australian Atomic Energy Commission*—minerals, raw and treated (including residues and tailings) containing more than 0.05 per cent of uranium or thorium, singly or together; uranium and thorium minerals including pitchblende and monazite; uranium, thorium, beryllium and lithium metals, compounds and alloys; hafnium-free zirconium metal, alloys and compounds; nickel metal in certain forms.



### Joint Coal Board

The Joint Coal Board was established in 1946 under joint legislation of the Commonwealth and of the State of New South Wales to carry out special administrative functions in regard to the New South Wales black coal mining industry. A summary of these functions is given below.

- (i) To ensure that coal is produced in the State of New South Wales in such quantities and with such regularity as will meet requirements throughout Australia and in trade with other countries;
- (ii) to ensure that the coal resources of the State are conserved, developed, worked and used to the best advantage in the public interest;
- (iii) to ensure that coal produced in the State is distributed and used in such manner, quantities, classes and grades, and at such prices as are calculated best to serve the public interest and secure the economical use of coal and the maintenance of essential services and industrial activities; and
- (iv) to promote the welfare of workers engaged in the coal industry in the State.

### Australian Atomic Energy Commission

During 1953, Commonwealth legislation was enacted to set up an Atomic Energy Commission which is responsible, in an overall sense, for the production and utilisation of uranium in Australia. This Act, the *Atomic Energy Act 1953*, superseded the *Atomic Energy (Control of Materials) Act 1946*, but retains a provision of that Act which provides for the control of substances which could be used for production or use of atomic energy.

The functions of the Commission fall under two main headings. Firstly, it is responsible for undertaking and encouraging the search for and mining of uranium and is empowered to co-operate with the appropriate authorities of the States in connection with these and related matters. Secondly it is authorised to develop the practical uses of atomic energy by constructing and operating plant for this purpose, carrying out research and generally fostering the advancement of atomic energy technology. The Commission operates under the direction of the Minister for National Development.

## Government assistance

The Commonwealth Government and the various State Governments provide assistance to the mineral industry in a variety of ways. The main forms of assistance are discussed below.

### Commonwealth Government Assistance

Assistance provided by the Commonwealth Government takes the form of income taxation concessions, subsidies, bounties, and technical assistance mainly through the work of the Bureau of Mineral Resources and the Commonwealth Scientific and Industrial Research Organization. A table showing direct Commonwealth Government payments to sectors of the mineral industry is included on page 907.

*Income taxation concessions.* One-fifth of the net income derived from mining for prescribed minerals in Australia or Papua New Guinea is exempt from tax. Principal minerals to which this concession applies are as follows: asbestos, bauxite, radio-active ores, rutile and zircon; and ores of copper, nickel and tin.

Income derived from mining principally for gold in Australia or Papua New Guinea is exempt from tax. The exemption is also available in respect of income derived from mining principally for gold and copper if the value of the gold obtained is not less than 40 per cent of the value of the total output.

Dividends paid wholly and exclusively out of exempt mining income are also exempt from tax.

One third of call moneys paid by resident and non-resident investors on non-redeemable shares in a company, whose principal business is mining or prospecting for minerals in Australia or Papua New Guinea, is allowable as a deduction from the investors' assessable income. Where the shares in such a company are issued after 9 May 1968, the deduction is dependent upon the company lodging a declaration that the call moneys have been, or will be, expended exclusively on the search for minerals (including petroleum) obtainable by mining.

Other valuable assistance has been given in the form of certain taxation concessions to encourage the search for petroleum and other minerals. Resident investors are permitted, for tax purposes, to deduct from their assessable income all application, allotment and call moneys paid for shares issued by petroleum exploration companies or companies engaged in prospecting or mining for other minerals obtainable by mining. These deductions are allowable only if the company elects to forgo



an equivalent amount of the special deductions for capital expenditure to which it would otherwise be entitled. Many companies engaged in exploring for petroleum and other minerals have elected to pass on this benefit to their shareholders.

Special deductions for capital expenditure incurred in the discovery and mining of petroleum are allowable to a company deriving income from the sale of petroleum, and products of that petroleum, mined by the company in Australia or Papua New Guinea. A company is entitled to these deductions only when it produces Australian petroleum in commercial quantities. The general effect of the deductions is to free the proceeds from the sale of Australian or Papua New Guinean petroleum and its products from tax until all allowable capital expenditure has been fully recouped. Dividends paid wholly and exclusively out of profits so freed from tax are exempt.

Capital expenditure allowable to petroleum exploration companies includes, broadly, the cost of exploratory surveys, drilling and well-head plant, access roads and expenditure on housing and welfare.

A company mining or prospecting for minerals other than petroleum and gold may also be allowed special deductions for capital expenditure. Broadly, allowable capital expenditure includes expenditure on exploration and prospecting, preparation of a site for extractive mining operations, buildings, other improvements and plant necessary for those operations, access roads, certain treatment plant and housing and welfare.

The allowable capital expenditure of a general mining company may be deducted over the life of the mine, or twenty-five years, whichever is the lesser. Alternatively, the mine owner may elect to have the allowable capital expenditure deducted in the year it is incurred or, where appropriations have been made for such expenditure to be incurred in the following year, the deduction may be allowed in the year of the appropriation. Annual deductions for depreciation on mining plant may be allowed in lieu of spreading the cost over the life of the mine. Expenditure on housing and welfare may, at the option of the mine owner, be allowed over the life of the mine, or five years.

Special deductions are allowable for capital expenditure incurred on certain transport facilities used primarily and principally in relation to minerals mined in Australia, for the transport of raw minerals and certain specified products obtained from the processing of such minerals, or for transporting petroleum between the oil or gas field and a refinery or other terminal. The special deduction applies to expenditure incurred on a railway, road, pipe-line or similar transport facility. Allowable expenditure on transport facilities is deductible in equal annual instalments over a period of ten years.

*Petroleum search subsidy.* In 1957 the Commonwealth Government introduced the *Petroleum Search Subsidy Act 1957* whereby stratigraphic drilling operations were subsidised to the extent of 50 per cent of cost. An amendment in 1959 widened the scope of operations for which subsidy was offered to include all types of geophysical surveys and off-structure drilling. Subsidy payments under the Act for the years 1967 to 1971 are shown in the table on page 907.

Various amendments to the Act and Regulations have altered the amount of subsidy and the type of operations to which a subsidy is applicable. The most recent amendment in 1969, provided for the payment of subsidy for approved operations completed before 30 June 1974. On-shore exploration drilling is subsidised at the rate of 30 per cent of approved costs and on-shore geophysical operations at a rate of 50 per cent. All similar off-shore operations are subsidised at a rate dependent upon the Australian financial contribution to the operation, the maximum rate being 30 per cent for operations wholly financed by Australian companies. Details of earlier amendments are given on page 1001 of Year Book No. 55.

*Pricing of Australian crude oil.* Early in 1965 the Tariff Board conducted a public inquiry to determine an appropriate price for Australian crude oil, having regard to the Commonwealth Government's desire to encourage the search for oil and the consequent need to offer sufficient incentive to exploration companies. At the same time the Government indicated that it was anxious to prevent or minimise increased costs of petroleum products to consumers and to ensure that refineries using Australian crude oil were not detrimentally affected in relation to other refineries. Evidence was heard from oil exploration, marketing and refining interests, government officials, coal and power interests, and major users of refined petroleum products. The Tariff Board recommended at that time that Moonie crude oil should be valued at \$2.69 a barrel at the nearest refinery centre, which included a variable differential related to the quality of the oil and an incentive of 22.4 cents per barrel. The Government adopted the Tariff Board's recommendations, and raised the incentive margin to 67 Australian cents a barrel; this margin to apply to all Australian crude oil producers.

To ensure that indigenous crude oil is used to the maximum extent in Australian refineries, the Government also adopted the Tariff Board's recommendation to impose penal import duties of 0.8 cents a gallon on crude oil and 2.4 cents a gallon on motor spirit to be paid by the companies which do not take their share of local crude oil. The share of local crude to be taken will be based on the importer's share of total imports of refinery feedstock or refined products or both.

Any oil found in Papua New Guinea will be covered by these policies in the same way as oil found in Australia.

Under these arrangements the price of Moonie crude is \$3.14 a barrel delivered Brisbane; and Barrow Island field when it commenced production in April 1967 was \$3.24 a barrel delivered Kwinana.

This pricing structure was to remain operative until 17 September 1970.

However, the discovery of very large crude oil reserves in the Gippsland Shelf fields revealed that this pricing structure could result in the Australian consumer paying more for indigenous petroleum products than for similar products refined from imported crude oils. Following negotiations with the Commonwealth Government the Gippsland Shelf operators agreed to forgo the \$0.67 a barrel incentive, plus a further \$0.05 per barrel. This applied from commencement of production in October 1969 to 17 September 1970. As from 18 September 1970, the price of all Australian crude oils has been based on 'import parity' as at 10 October 1968, the date on which the new arrangements were announced by the Prime Minister in Parliament. This new pricing structure is also for a 5 year period.

Under this agreement the Gippsland crude oil will be priced in the following manner:

	<i>per barrel</i> \$
Weighted average posted price as at 10 October 1968 of principal crudes imported into Australia . . . . .	1.62
less weighted average discounts as at 10 October 1968 . . . . .	0.26
	<hr/> 1.36
plus weighted average overseas freights as at 10 October 1968 . . . . .	0.46
Wharfage and other charges as at 10 October 1968 . . . . .	0.07
	<hr/> 1.89
less a deduction for coastal freight . . . . .	0.09
	<hr/> 1.80

To this the quality differential of approximately \$0.26 per barrel is added. The quality differential varies according to changes which occur in the quality of the oil produced.

Moonie crude oil on the same basis, for the five-year period will be \$2.15 per barrel f.o.b. Brisbane, since the coastal freight deduction of 9 cents per barrel does not apply.

Barrow Island crude will be the basic \$1.89 per barrel plus a quality differential of 34 cents, giving the total of \$2.23 per barrel f.o.b. Kwinana.

The Government has announced that the absorption of Australian crude oil by Australian refineries will be Government policy until September 1980. The allocations to refining and marketing companies are now based on the sales volume of certain products, and the associated penal duties on imports made by companies not taking up their allocations have been increased to 7.5 cents per gallon on motor spirit, 5 cents per gallon on other refined products and 2 cents per gallon on crude oil.

The Government has also announced that, should the production of Australian crude oil exceed the capacity of the refiners to absorb indigenous crude, the available market will be shared between all producing companies on a formula based on the reserves of each company. Export of the excess crude oil will be permitted.

*Assistance to the gold-mining industry.* Assistance to the gold-mining industry by subsidy was introduced at a time of rising costs in the industry and fixed official world price for gold. Because many producers were faced with the likelihood of closing down, the Government decided to subsidise marginal producers in Australia and Papua New Guinea. Under the *Gold-Mining Industry Assistance Act* 1954 a producer, the value of whose gold output exceeded 50 per cent of the total value of his mine output, was eligible for assistance, subject to certain conditions, on the production of gold from 1 July 1954. The assistance scheme has been reviewed on a number of occasions since the Act was originally passed, and some liberalisations have been approved, including increases in the rates of subsidy payable authorised in amendments passed in 1957, 1959, 1965 and 1972.

Under the Act as it now stands the subsidy payable to small producers whose annual deliveries do not exceed 500 fine oz is \$6 per fine oz, irrespective of cost of production. For large producers, subject to certain provisions, the rate of subsidy payable is an amount equal to three-quarters of the excess of the average cost of production over \$27 per fine oz, with a maximum amount of subsidy of \$12 per fine oz. A producer whose deliveries during the year exceed 500 fine oz may elect to be treated

as a small producer. In this case the subsidy rate payable per fine oz on total deliveries is \$6 reduced by 1c for each fine oz by which deliveries exceed 500 fine oz. The benefit under this provision terminates when deliveries in a year reach 1,100 fine oz. Where a producer receives an amount in excess of the official price of \$31.25 per fine oz as a result of sales on overseas premium markets or otherwise, the subsidy payable is, with effect from 1 January 1972, reduced by fifty per cent of the amount of the excess. Prior to 1 January 1972 subsidy was reduced by seventy-five per cent of the excess.

Payments under the Act will apply to production until 30 June 1973. The amounts paid to gold producers in the various States and Territories of Australia in each of the years 1967 to 1971 are shown in the table below.

*Assistance to the producers of sulphuric acid and iron pyrites.* Following recommendations of the Tariff Board, the *Sulphuric Acid Bounty Act* 1954–1971 and the *Pyrites Bounty Act* 1960–1971 were extended to 31 May 1972. The Acts provide for payment of bounty on sulphuric acid produced from prescribed Australian materials, and to producers of iron pyrites. Payments under these Acts for the years 1967 to 1971 are shown in the table below.

*Payments to producers of phosphate fertilisers.* The *Phosphate Fertilisers Bounty Act* 1963–1971 provides for a bounty to be paid on superphosphate and ammonium phosphate manufactured and used in Australia as a fertiliser. (This includes approved trace elements, compounds or substances when added to superphosphate). Bounty is payable on the soluble content of phosphorus pentoxide. A standard grade of superphosphate containing between 19.5 and 20.5 per cent soluble content of phosphorus pentoxide qualifies for full bounty of \$12 per ton. Outside this range, bounty is payable at \$60 per ton of contained phosphorus pentoxide. The intention of this Act is to assist consumers of phosphate fertilisers (primary producers). The Act is due to expire on 31 December 1974. Payments under the Act, for the years 1967 to 1971, are set out in the following table.

**COMMONWEALTH GOVERNMENT PAYMENTS TO THE MINERAL  
INDUSTRY: AUSTRALIA, 1967 TO 1971**

(\$'000)

Year	Petroleum exploration (a)	Gold mining(b)	Pyrites mining(c)	Sulphuric acid production (d)	Phosphate fertiliser production (e)
1967 . . .	10,327	3,859	46	1,382	25,544
1968 . . .	13,805	2,817	..	1,279	24,907
1969 . . .	14,911	1,077	..	988	31,665
1970 . . .	11,237	3,278	90	740	45,820
1971 . . .	8,468	2,162	568	489	40,815

(a) *Petroleum Search Subsidy Act* 1959–69. Includes payments in Papua New Guinea; see also the table on page 931. (b) *Gold-Mining Industry Assistance Act* 1954–72. Includes payments in Papua New Guinea. (c) *Pyrites Bounty Act* 1960–1971. (d) *Sulphuric Acid Bounty Act* 1954–1971. (e) *Phosphate Fertilisers Bounty Act* 1963–1971.

*Bureau of Mineral Resources, Geology and Geophysics.* The functions of the Bureau are as follows:

- (i) as a primary function, to obtain, study, publish and provide basic geological and geophysical information necessary for the exploration and development of the nation's mineral resources; this to be done where appropriate in co-operation with State and Territorial authorities;
- (ii) to undertake experimental studies and research into geology and geophysics in order to support the function of obtaining basic information;
- (iii) to make basic investigations of the earth's magnetic and gravitational fields and in seismology and vulcanology;
- (iv) to complement the work of the State and Territorial authorities by undertaking geological and geophysical investigations into the occurrence and distribution of underground water;
- (v) to undertake geological and geophysical investigations on behalf of other Commonwealth Departments and authorities including the provision of resident staff by arrangement with the Territories;
- (vi) to obtain basic information on, and review the mineral resources of the Commonwealth and its Territories; to study the various sectors of the mineral industry both in the national and international spheres; to publish and provide information about the mineral industry;



- (vii) to undertake such investigations in mining engineering and petroleum technology as are relevant to (i) and (vi) above;
- (viii) to prepare advice for Government on the mineral industry, including the exploration and development of mineral resources in the national interest;
- (ix) when directed by Government, to administer schemes for the assistance of sectors of the mineral industry and to undertake special mineral projects.

The Bureau comprises five branches under the Director: Operations, Mineral Resources, Geological, Geophysical, and Petroleum Exploration. The Operations Branch consists of three sections, Planning and Co-ordination, Publications and Information, and Administrative. It carries out central office functions, including planning and control of programme, assessment of results, co-ordination of activities, liaison, and distribution of information. The Mineral Resources Branch comprises the sections Mineral Economics, Mining Engineering, and Petroleum Technology, and is concerned largely with those aspects of the Bureau's work which involve studies of the mineral industry as a whole, and the preparation of advice and reviews for the Government, industry and the public. The Geological and Geophysical Branches are responsible for the principal field activities of the Bureau, and the operation of observatories, while the Petroleum Exploration Branch is concerned with the administration of the *Petroleum Search Subsidy Act* 1959–1969 and is also engaged in the assessment of sedimentary basins in Australia and its Territories. The establishment of the Bureau is 627 officers (at 30 June 1971), of whom 308 were professional. The budget for the financial year 1971–72 was \$17.3 million, of which \$8.6 million was provided for payment under the *Petroleum Search Subsidy Act* 1959–1969.

The Bureau maintains laboratories in Canberra and Darwin which are engaged on geochemical, geochronological and petroleum technological studies and basic research into the design and testing of geophysical equipment. The Bureau also maintains a volcanological observatory at Rabaul and geophysical observatories at Toolangi, Mundaring, Port Moresby, Mawson (Antarctica), and Macquarie Island. The geophysical observatories are engaged in magnetic, ionospheric, and seismic investigations and are base stations for field operations.

*Commonwealth Scientific and Industrial Research Organization.* The activities of this body with respect to the mineral industry are discussed on page 908 under Research.

#### State Government assistance

In addition to free assays and determinations of rocks and minerals carried out for prospectors by the Mines Departments of the States and Territories, technical officers of these departments provide advice to the mining and allied industries where required, carry out field examinations of mining prospects, advise on exploration and development, select sites for water supply, and in general give a free technical service to the mining industry.

*New South Wales.* The State Mines Department renders scientific, technical and financial assistance to the mining industry. Grants, which are repayable in the event of pay minerals being discovered, are made to cover half the cost of prospecting and drilling operations. Loans may be made to prospectors and miners for the purchase of plant and machinery. A quantity of equipment is also available for hire in several localities. The Department has itself undertaken a programme of contract drilling to investigate the existence of mineral deposits in the State (including the testing and proving of coal resources). Expenditure on financial assistance in 1970–71 amounted to \$944,631 including \$617,589 on the Department's own drilling programme.

*Victoria.* The Mines Department conducts geological and mineral surveys and produces geological maps and issues scientific and technical reports thereon. Extensive rotary, percussion and auger drilling operations are carried out and in conjunction with these, sedimentary basin studies are made to evaluate petroleum, mineral and groundwater potential. A comprehensive library and a geological museum are maintained and a core library retains cores and cuttings from drilling operations. The administration of petroleum and pipeline legislation ensures the conduct of all petroleum exploration and production operations, onshore and offshore, in a safe and effective manner. Technical and drilling assistance and loans or grants are available for mineral exploration and prospecting and for approved development operations. Six stamp batteries provide an ore crushing service to enable test crushings to be made at nominal cost. Information is available on mining law and mineral statistics. Assays of ores, analytical services, advice on metallurgical treatments, industrial pollution and chemical problems are available together with information on the manufacture, handling and use of explosives. Financial assistance is available to municipalities to reclaim mine-damaged land, in areas where a Reclamation Committee recommends such action.



*Queensland.* The Department of Mines provides assistance to mining by way of geological services, grants for construction and maintenance of roads in mining areas, repayable advances or subsidies for mine development, hiring of equipment, and assistance to prospectors. The Department maintains a concentration plant for tin ores at Irvinebank, an assay office at Cloncurry, a battery for treatment of gold-bearing ores at Charters Towers, and diamond drilling plants in various parts of the State.

*South Australia.* The Department of Mines provides the following services and facilities to the mineral industry: (i) drilling and testing of mineral deposits, geophysical investigations, well logging, development of sub-surface water supplies for farming, pastoral, irrigation, and mining purposes; (ii) geological examination of mineral deposits, ground water supplies, dam foundation and drainage problems, guidance on mining legislation, and publication and issue of geological bulletins and maps. It also provides, through the Australian Mineral Development Laboratories, facilities for chemical, metallurgical, analytical and assay investigations, testing and treatment of ores and minerals, and petrographic, mineragraphic and radiometric determinations. Pilot scale metallurgical and chemical treatment plants are maintained and operated for the development of mineral extraction processes.

*Western Australia.* Prospectors receive assistance of either \$15 or \$17.50 a week according to the prospecting locality. North of the 26th parallel and within a defined area south of this lying largely outside the agricultural areas assistance is given to the extent of \$17.50 a week. In the remainder of the State prospectors receive \$15 a week. Provision is also made for the supply of some tools required for prospecting. There are sixteen State batteries operating intermittently throughout the goldfields for the treatment of ore from prospectors and small mine-owners at a nominal charge. A cartage subsidy is also granted to such operators sending gold and lead ores to State batteries for treatment. Provision is made for loans to mine-owners who require assistance to develop mines. The Government also has a drilling scheme, financing mine-owners on a \$1 for \$1 basis.

*Tasmania.* The Department of Mines provides financial assistance to mining lessees for the purchase of plant and machinery, for sinking, repairing or de-watering of shafts, for construction of dams and water races, for testing and proving a deposit of any mining product, for developmental work, and for diamond and other types of drilling. The Department has available for hire percussion and diamond drills for exploration, as well as a complete plant for small shaft sinking and tunnelling. Other assistance is rendered to the industry in the form of geological and engineering advice, through ore-dressing research into metallurgical recoveries, and the selection and design of treatment plant.

*Northern Territory.* To encourage the development of the mining industry the Northern Territory Administration operates two batteries for the treatment of ores for miners. The Tennant Creek battery will continue cyaniding the gold in accumulated tailings and is available for crushing. The Mount Wells battery is crushing mainly parcels of tin ores. Small quantities of ore containing gold, silver, lead, copper and wolfram are also crushed from time to time. The crushing charges are subsidised by the Government. In addition the Northern Territory Administration provides cartage subsidies and financial advances to encourage miners to carry out mining operations. Assistance is also given to the mining industry by drilling encouraging prospects. Roads and water supply services are provided and maintained for mines under active development throughout the Northern Territory.

## Research

Research investigations into problems of mining, ore-search, ore-dressing and metallurgy are conducted by Government bodies, by universities, by private enterprise, and by combined efforts of these bodies. A summary of their functions follows.

### Australian Atomic Energy Commission

The Australian Atomic Energy Commission conducts research at its laboratories at Lucas Heights in Sydney on the development of nuclear power, including research on nuclear materials and on metals and ceramics used for nuclear power. Research conducted by the Commission is discussed in detail in Year Book No. 55, page 561.

### The Australian Mineral Development Laboratories

Contract research and technical consulting for the mineral and associated industries is undertaken by The Australian Mineral Development Laboratories (Amdel), at Adelaide. This Organisation is controlled by a council comprising representatives of the mineral industry, the South Australian Government and the Commonwealth Government. Extensive facilities are available in the fields of analytical chemistry, mineralogy and petrology, chemical metallurgy and mineral engineering, operations research/computer services and materials technology. Both long and short term applied research is carried out and all investigations are conducted on a strictly confidential basis.

### **The Baas Becking Geobiological Research Laboratory**

In 1965 the Baas Becking Geobiological Research Laboratory was established in the Bureau of Mineral Resources Building in Canberra, under the joint sponsorship of the Commonwealth Scientific and Industrial Research Organization, the Bureau of Mineral Resources, and the Australian Mineral Industries Research Association (*see* Research by private enterprise, page 911). The broad objective of the research work is to investigate the biological and chemical processes associated with the formation of mineral deposits of the stratiform type.

Initial emphasis is being placed on investigations to establish the relationship of biological factors to the natural physico-chemical environment with particular reference to the possible role of these factors in the formation and transformation of sulphide minerals. Investigations have included the response of micro-organisms to heavy metals; biochemistry and physiology of oxidative and reductive sulphur transformations; role of organisms in the concentration of mineral elements; physico-chemistry of low-temperature mineral synthesis; mobility of sulphides under the influence of temperature and pressure and the interaction of mineral types; and biological leaching of low-grade sulphide minerals.

### **Bureau of Mineral Resources, Geology and Geophysics**

Mineral research by the Bureau of Mineral Resources is concerned with basic problems of mineral emplacement. Special studies are undertaken of: the sedimentary environment of potentially oil-bearing rocks; the genesis of continental and marine phosphate; the fundamental chemistry of metallic ore deposits; the structural, chemical, and stratigraphic contents of ore deposits; and geo-physical interpretation by means of model testing.

For details of the functions of the Bureau of Mineral Resources, Geology and Geophysics, *see* page 907.

### **Commonwealth Scientific and Industrial Research Organization**

Research for the mineral industry by the Commonwealth Scientific and Industrial Research Organization is undertaken mainly in the Minerals Research Laboratories comprising the Divisions of Mineral Chemistry, Chemical Engineering and Mineralogy, and the Mineral Physics Section. Major laboratories are located at Clayton (Vic.), Port Melbourne, Sydney and Perth. Current research programme objectives and sub-programme titles are:

- (a) *Exploration*. To improve and develop procedures for locating mineral deposits (surface geochemistry, rock geochemistry, structural analysis, geobiology, remote sensing).
- (b) *Mineralisation*. To improve methods of recognizing and defining the nature and economic significance of specific types of mineralisation (nickel, chromium, acid igneous deposits, stratiform ores, ore-forming fluids, electromagnetic geophysics, field analysis, mineral structures).
- (c) *Mining and concentration*. To identify, and utilize in practice, those properties of minerals and rocks which will increase the overall efficiency of their mining, concentration and handling (mineral dressing, flotation chemistry, reactivity, non-metals).
- (d) *Process Metallurgy*. To improve and develop methods for the economic processing of minerals and mineral products (slags, sulphide electrolysis, iron ore, nickel ores, ilmenite, copper, tin, zinc, lead, structures and bonding, plasmas).
- (e) *Fuels*. To improve and develop methods for exploiting fossil fuels (deposits, electrode carbon, combustion, gas cleaning).
- (f) *Associated industries*. To apply the skills and expertise of the Mineral Research Laboratories to the improvement and development of industrial processes not necessarily connected with the minerals industry (polymers, pulp and paper, sugar, chemicals, dairy).

The minerals industry provides strong support in the form of co-operative research planning, collaborative investigation of specific projects, and financial grants for appropriate developmental work.

### **National Coal Research Advisory Committee**

The functions of the National Coal Research Advisory Committee are to review coal research activity in Australia, to recommend priorities for further activities in this area, and to allocate special Commonwealth funds of \$260,000 per year provided for coal research projects as recommended by the committee. This amount is additional to that expended by C.S.I.R.O. and Commonwealth Departments on coal research. The major beneficiary under this scheme is the Australian Coal Industry Research Laboratories; other beneficiaries have been the State Electricity Commission of

Victoria (for brown coal research) and the Universities. From 1965 to 1969 special coal research funds of \$520,000 annually were available to the committee, comprising the Commonwealth contribution of \$260,000 matching an equivalent total contribution from State Governments and coal producing and consuming industries. Beginning with the financial year 1968-69 the States and industry are independently sponsoring coal research and development according to their own individual requirements.

### University Research

The various universities in Australia carry out research into various aspects of the mineral industry such as geology, ore mineralogy and genesis, mining techniques, mineral processing, extractive metallurgy, and materials and metals technology.

### Research by private enterprise

Most large mining and smelting companies have laboratories dealing with their own individual problems. Private industry formed the Australian Mineral Industries Research Association in 1959 to provide industry with representation in the management of the Australian Mineral Development Laboratories. The Association now finances research work into geology, mining and mineral processing at Universities, C.S.I.R.O. and the Australian Mineral Development Laboratories. Membership of the Association at 30 June 1971 was: full members 59, associate members 18, registered divisions 13. This represented a large proportion of the mining, metallurgical and related companies operating in Australia at that time. Expenditure on research projects during the year 1970-71 was \$367,840.

## International relations

Because Australia is a large supplier of certain minerals to the rest of the world and because the welfare of the domestic industry depends to a large extent on the maintenance of a high level of exports, international relations are of considerable importance to the industry, and the Commonwealth Government takes an active role in international consultations and discussions relating to minerals. The most important international commitments are discussed below.

### International Tin Agreement

The First International Tin Agreement (of the post-war period) was in operation for five years from 1 July 1956 to 30 June 1961. This Agreement was subsequently replaced by the Second and Third International Tin Agreements, which came into force on 21 February 1962 and 21 March 1967, respectively. Details of these Agreements are given in Year Book No. 57, pages 911-12.

Australia has signed and ratified the Fourth International Tin Agreement which came into operation on 1 July 1971 for a period of 5 years. Australia joined the Fourth Agreement as a 'producing' (i.e. exporting) member, whereas in the past Agreements Australia's status had been that of a 'consuming' (i.e. importing) member. This stems from the fact that Australia's tin production has increased significantly over recent years making it a net exporter of tin.

The objectives of this Agreement are the same as for its predecessors. Producing countries are required to contribute to a buffer-stock-equivalent in cash or tin up to 20,000 tons of tin metal, which is used to buffer short-term fluctuations in the world market price. In the event of persistent market disequilibrium through causes beyond the ability of the buffer stock mechanism to control, the agreement also provides for the regulation of exports and stocks to stabilise the market. The main provisions of the Fourth Agreement are substantially the same as those of the Third. However, the Buffer Stock Manager, a paid Council employee charged with operating the buffer stock, has been given somewhat greater flexibility in reacting to market situations.

The International Tin Agreement is operated by the International Tin Council, which is made up of the following Governments: *Producers*—Australia, Bolivia, Indonesia, Malaysia, Nigeria (Federal Republic of), Thailand, Zaire (Republic of). *Consumers*—Austria, Belgium-Luxembourg, Bulgaria, Canada, Czechoslovakia, Denmark, France, Germany (Federal Republic of), Hungary, India, Italy, Japan, Korea (Republic of), Netherlands, Poland, Spain, United Kingdom, Union of Soviet Socialist Republics and Yugoslavia. The producing countries hold a total of 1,000 votes, distributed so that each country receives five initial votes and an additional number corresponding to its percentage as laid down by the Agreement. The consuming countries hold a total of 1,000 votes also distributed so that each country receives five initial votes and an additional number proportionate to tonnages consumed. The allocation of votes in each category is periodically reviewed.



The International Tin Agreement establishes floor and ceiling prices for tin and, by the medium of a buffer stock and remedial trading on the London Metal Exchange, aims at confining the price within these limits.

#### **International Lead-Zinc Study Group**

With the cessation of stockpile buying of lead and zinc by the United States Government in 1958, world producers were faced with the prospect of a serious imbalance between world supply and demand for these metals. To meet this problem a series of meetings of interested governments was held, at which Australia was represented. These meetings culminated in the formation of the International Lead-Zinc Study Group which was established in January 1960. The Study Group comprises the following Governments: Algeria, Australia, Austria, Belgium, Bulgaria, Canada, Czechoslovakia, Denmark, Finland, France, the Federal Republic of Germany, Hungary, India, Italy, Japan, Mexico, Morocco, the Netherlands, Norway, Peru, Poland, the Republic of South Africa, Spain, Sweden, Tunisia, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, the United States of America, Yugoslavia and Zambia. The Group provides opportunities for inter-governmental consultations on international trade in lead and zinc and for studies of the world situation in lead and zinc having regard especially to the desirability of providing continuous accurate information regarding the supply and demand position and its probable development.

### **MINERAL INDUSTRY STATISTICS**

Statistics presented in this chapter refer mainly to the mining industry, mineral production, mineral exploration, and overseas participation in the Australian mining industry. In addition to the mining industry, data relating to mineral processing and treatment and overseas trade are included to give a more complete picture of the place of the mining industry and other associated activities in the Australian economy.

#### **Mining industry statistics, 1968-69 and 1969-70**

This section contains statistics of the mining industry for all States and Territories and Australia obtained from Mining Censuses taken in respect of the years ended June 1969 and 1970.

Prior to 1968-69 the Annual Mining and Quarrying Census related to years ended 31 December. However, commencing with 1968-69, the Mining Census was changed to a year ended 30 June to conform with the period covered by other economic censuses in Australia. There are several other differences between the censuses of 1968-69 and 1969-70 and those for earlier years (mainly in definition, scope and coverage) and as a result the statistics obtained for 1968-69 and later, are not strictly comparable with those for earlier years. Further information regarding these differences is given in Year Book No. 57, pages 912-914. Mining industry statistics for years prior to 1968-69 are also contained in Year Book No. 57 and earlier issues.

For the year ended June 1969, the Mining Census (including quarrying) was conducted for the first time on an integrated basis with Censuses of Manufacturing, Electricity and Gas, Retail Trade and Selected Services, and Wholesale Trade.

Briefly, the integration of these economic censuses was designed to increase substantially the usefulness and comparability of economic statistics collected and published by the Bureau, and to form a basis for the sample surveys which supply current economic statistics from quarter to quarter, particularly those which provide data for the quarterly national income and expenditure estimates. A detailed description of the integrated censuses is contained in Chapter 31, Year Book No. 56.

For 1969-70 and subsequent years the annual Mining Census has been conducted on the same basis as that for 1968-69.



The statistics in this sub-section are subject to revision. The table below shows key items of data for Australia for 1968-69 and 1969-70. Each following table shows statistics for a particular item for all States and Territories and Australia for 1968-69 and 1969-70 and is preceded by an explanation of the item.

**MINING ESTABLISHMENTS: SUMMARY OF OPERATIONS, BY INDUSTRY SUB-DIVISION  
AUSTRALIA, 1968-69 AND 1969-70**

Industry sub-division	ASIC code(a)		Number of establishments operating during year	Persons employed(b)			Wages and salaries	Turn-over	Stocks at 30 June		Purchases, transfers in and selected expenses	Value added	Fixed capital expenditure (outlay on fixed tangible assets less disposals)
	No.	No.		Males	Females	Total			Opening	Closing			
	No.	No.	No.	No.	No.	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	
1968-69													
Metallic minerals . . .	11	339	25,428	1,243	26,671	115,156	639,872	59,028	72,600	223,861	429,583	130,030	
Coal . . .	12	151											
Crude petroleum including natural gas . . .	13	7											
Construction materials . . .	14	843	6,284	408	6,692	23,307	120,928	9,163	10,039	45,978	75,827	10,290	
Other non-metallic minerals . . .	15	345	1,950	79	2,029	6,349	36,556	2,950	3,385	16,155	20,836	10,971	
Total mining, excluding services to mining . . .		1,685	53,174	2,051	55,225	239,720	1,141,299	97,771	113,367	421,087	735,809	302,905	
1969-70p													
Metallic minerals . . .	11	369	27,420	1,462	28,882	138,156	867,948	73,239	85,609	245,418	634,900	164,040	
Coal . . .	12	145											
Crude petroleum including natural gas . . .	13	8											
Construction materials . . .	14	864	6,364	439	6,803	25,143	131,957	10,648	12,418	51,780	81,950	15,419	
Other non-metallic minerals . . .	15	381	2,129	106	2,235	8,064	45,673	3,801	4,844	23,098	23,618	12,728	
Total mining, excluding services to mining . . .		1,767	56,303	2,358	58,661	273,410	1,526,055	114,840	138,215	494,554	1,054,878	346,593	

(a) Australian Standard Industrial Classification.

(b) At 30 June; includes working proprietors.

**Number of establishments**

The following table shows the number of establishments which operated during the years 1968-69 and 1969-70. These relate to mining establishments as such and do not include the numbers of separately located administrative offices and ancillary units.

**MINING ESTABLISHMENTS: NUMBER OF ESTABLISHMENTS OPERATING DURING  
1968-69 AND 1969-70, BY INDUSTRY SUB-DIVISION, STATES AND TERRITORIES**

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1968-69										
Metallic minerals . . .	11	79	10	112	5	77	40	16	..	339
Coal . . .	12	99	5	40	1	3	3	..	..	151
Crude petroleum including natural gas . . .	13	..	2	4	..	1	..	..	..	7
Construction materials . . .	14	320	199	140	97	45	30	..	7	843
Other non-metallic minerals . . .	15	163	51	29	59	33	10	..	..	345
Total mining, excluding services to mining . . .		661	267	325	162	159	83	21	7	1,685
1969-70p										
Metallic minerals . . .	11	109	6	110	11	72	41	20	..	369
Coal . . .	12	103	5	30	1	3	3	..	..	145
Crude petroleum including natural gas . . .	13	..	2	4	1	1	..	..	..	8
Construction materials . . .	14	337	180	145	103	55	29	7	8	864
Other non-metallic minerals . . .	15	207	39	34	58	34	9	..	..	381
Total mining, excluding services to mining . . .		756	232	323	174	165	82	27	8	1,767

(a) Australian Standard Industrial Classification.

## Employment

The statistics of the number of persons employed shown in the following table relate to working proprietors at the end of June and employees on the payroll of the last pay period in June, including those working at separately located administrative offices and ancillary units in the State. Note that persons employed in each State (and their wages and salaries) relate to those employed at establishments, administrative offices or ancillary units located in the State, even though the administrative offices or ancillary units may have served establishments located in another State.

**MINING ESTABLISHMENTS: MALES, FEMALES AND PERSONS EMPLOYED(a)  
BY INDUSTRY SUB-DIVISION, STATES AND TERRITORIES, AT 30 JUNE 1969 AND 1970**

Industry sub-division	ASIC code(b)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
MALES EMPLOYED										
1969										
Metallic minerals . . .	11	6,928	3,074	{ 6,277 2,289 }	812	{ 6,620 676 }	{ 3,642 (c) }	1,186	..	25,428
Coal . . .	12	13,355								
Crude petroleum including natural gas . . .	13	..	1,774	{ (c) 1,042 }	614	{ 357 339 }	{ 174 (c) }	47	86	6,284
Construction materials . . .	14	2,172								
Other non-metallic minerals	15	609	244	(c)	442	339	(c)	..	..	1,950
<b>Total mining, excluding   services to mining . . .</b>		<b>23,064</b>	<b>5,092</b>	<b>9,889</b>	<b>1,868</b>	<b>8,010</b>	<b>3,932</b>	<b>1,233</b>	<b>86</b>	<b>53,174</b>
1970p										
Metallic minerals . . .	11	7,331	3,296	{ 6,925 2,285 }	888	{ 7,158 707 }	{ 3,850 (c) }	1,323	..	27,420
Coal . . .	12	13,956								
Crude petroleum including natural gas . . .	13	..	1,766	{ (c) 1,159 }	624	{ 424 410 }	{ 158 (c) }	68	64	6,364
Construction materials . . .	14	2,101								
Other non-metallic minerals	15	721	229	(c)	412	410	(c)	..	..	2,129
<b>Total mining, excluding   services to mining . . .</b>		<b>24,109</b>	<b>5,291</b>	<b>10,694</b>	<b>1,924</b>	<b>8,699</b>	<b>4,131</b>	<b>1,391</b>	<b>64</b>	<b>56,303</b>
FEMALES EMPLOYED										
1969										
Metallic minerals . . .	11	238	159	{ 425 61 }	55	{ 261 12 }	{ 136 (c) }	47	..	1,243
Coal . . .	12	168								
Crude petroleum including natural gas . . .	13	..	156	{ (c) 66 }	26	{ 16 16 }	{ 3 (c) }	1	10	408
Construction materials . . .	14	130								
Other non-metallic minerals	15	28	10	(c)	15	16	(c)	..	..	79
<b>Total mining, excluding   services to mining . . .</b>		<b>564</b>	<b>325</b>	<b>558</b>	<b>96</b>	<b>305</b>	<b>145</b>	<b>48</b>	<b>10</b>	<b>2,051</b>
1970p										
Metallic minerals . . .	11	283	163	{ 502 43 }	83	{ 308 13 }	{ 164 (c) }	50	..	1,462
Coal . . .	12	199								
Crude petroleum including natural gas . . .	13	..	157	{ (c) 79 }	24	{ 50 15 }	{ 2 (c) }	5	1	439
Construction materials . . .	14	121								
Other non-metallic minerals	15	56	9	(c)	15	15	(c)	..	..	106
<b>Total mining, excluding   services to mining . . .</b>		<b>659</b>	<b>329</b>	<b>634</b>	<b>122</b>	<b>386</b>	<b>172</b>	<b>55</b>	<b>1</b>	<b>2,358</b>

(a) At 30 June; includes working proprietors.  
for publication.

(b) Australian Standard Industrial Classification.

(c) Not available

MINING ESTABLISHMENTS: MALES, FEMALES AND PERSONS EMPLOYED<sup>(a)</sup>  
BY INDUSTRY SUB-DIVISION, STATES AND TERRITORIES AT 30 JUNE  
1969 AND 1970—continued

Industry sub-division	ASIC code(b)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
PERSONS EMPLOYED										
1969										
Metallic minerals . . .	11	7,166	3,233	6,702	867	6,881	3,778	1,233	..	26,671
Coal . . .	12	13,523		2,350		(c)	(c)	..	..	19,833
Crude petroleum including natural gas . . .	13	..	1,930	(c)	640	688	..	..	..	6,692
Construction materials . .	14	2,302		1,108		391	177	48	96	2,029
Other non-metallic minerals	15	637		(c)		355	(c)	..	..	..
Total mining, excluding services to mining . . .		23,628	5,417	10,447	1,964	8,315	4,077	1,281	96	55,225
1970 P										
Metallic minerals . . .	11	7,614	3,459	7,427	971	7,466	4,014	1,373	..	28,882
Coal . . .	12	14,155		2,328		(c)	(c)	..	..	20,741
Crude petroleum including natural gas . . .	13	..	1,923	(c)	648	720	..	..	..	6,803
Construction materials . .	14	2,222		1,238		474	160	73	65	2,235
Other non-metallic minerals	15	777		(c)		425	(c)	..	..	..
Total mining, excluding services to mining . . .		24,768	5,620	11,328	2,046	9,085	4,303	1,446	65	58,661

(a) At 30 June; includes working proprietors.  
for publication.

(b) Australian Standard Industrial Classification.

(c) Not available

### Accidents in mining

Particulars of numbers of persons killed and injured in accidents in mines and associated treatment plants are recorded by State Mines Departments. Numbers injured are not reported on a uniform basis in all States, as varying criteria are used in determining what constitutes injury. In 1969-70 (calendar year 1969 for Queensland), 79 persons were recorded as killed and 2,283 as injured in mining (including quarrying) accidents. Recorded deaths and injuries in that year in the metallic minerals industry were 21 and 679, and in the coal mining industry 20 and 343.

### Wages and salaries

The following table shows the wages and salaries of all employees of the establishment, including those working at separately located administrative offices and ancillary units in the State. Drawings of working proprietors are not included.

MINING ESTABLISHMENTS: WAGES AND SALARIES BY INDUSTRY SUB-DIVISION  
STATES AND TERRITORIES, 1968-69 AND 1969-70

(\$'000)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1968-69										
Metallic minerals . . .	11	32,622	14,879	31,807	3,563	23,749	16,281	6,387	..	115,156
Coal . . .	15	65,824		11,875		(b)	(b)	..	..	94,909
Crude petroleum including natural gas . . .	13	..	7,162	(b)	1,894	2,760	..	..	..	23,307
Construction materials . .	14	8,009		3,314		1,780	548	240	360	6,349
Other non-metallic minerals	15	1,832		(b)		990	(b)	..	..	..
Total mining, excluding services to mining . . .		108,287	22,840	48,181	6,929	29,279	17,217	6,626	360	239,720
1969-70 P										
Metallic minerals . . .	11	36,653	14,916	37,478	3,748	34,764	17,531	7,614	..	138,156
Coal . . .	12	71,582		12,699		(b)	(b)	..	..	102,048
Crude petroleum including natural gas . . .	13	..	7,680	(b)	2,094	2,903	..	..	..	25,143
Construction materials . .	14	8,642		3,171		2,229	527	403	397	8,064
Other non-metallic minerals	15	2,559		(b)		1,691	(b)	..	..	..
Total mining, excluding services to mining . . .		119,436	23,405	54,770	7,362	41,497	18,527	8,017	397	273,410

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

## Turnover

The following table shows turnover (sales of minerals and other goods whether produced by the establishment or not, plus transfers out of minerals and other goods to other establishments of the same enterprise, plus all other operating revenue from outside the enterprise, such as commission, repair and service revenue). This item excludes rents, leasing revenue, interest, royalties, and receipts from the sale of fixed tangible assets.

**MINING ESTABLISHMENTS: TURNOVER, BY INDUSTRY SUB-DIVISION  
STATES AND TERRITORIES, 1968-69 AND 1969-70**  
(\$'000)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1968-69p										
Metallic minerals . . .	11	134,243	47,889	147,436	58,456	212,184	58,888	34,726	..	639,872
Coal . . .	12	186,919		54,789		40,022	(b)	..	..	343,942
Crude petroleum including natural gas . . .	13	..	39,969	13,993	9,180		11,501	3,212	1,566	
Construction materials . .	14	39,867				10,155				4,873
Other non-metallic minerals	15	10,155								
Total mining, excluding services to mining . . .		371,184	92,730	228,590	81,184	266,604	63,073	36,292	1,641	1,141,299
1969-70										
Metallic minerals . . .	11	165,075	199,959	198,144	66,846	327,808	80,302	36,494	..	867,948
Coal . . .	12	218,888		74,408		53,408	(b)	..	..	480,478
Crude petroleum including natural gas . . .	13	..	43,512	(b)	10,650		10,452	2,775	2,046	
Construction materials . .	14	46,467				13,859				4,521
Other non-metallic minerals	15	13,859								
Total mining, excluding services to mining . . .		444,289	167,992	299,331	92,014	397,658	84,253	38,540	1,978	1,526,055

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

## Purchases, transfers in and selected expenses

The following table shows the total of purchases of electricity, fuels, stores and other materials, transfers in of goods from other establishments of the same enterprise, charges for processing and other commission work and payments to mining contractors, repair and maintenance expenses, outward freight and cartage, motor vehicle running expenses and sales commission payments.

**MINING ESTABLISHMENTS: PURCHASES, TRANSFERS IN AND SELECTED EXPENSES  
BY INDUSTRY SUB-DIVISION, STATES AND TERRITORIES, 1968-69 AND 1969-70**  
(\$'000)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1968-69p										
Metallic minerals . . .	11	46,576	20,325	49,613	17,176	80,908	18,638	14,063	..	223,861
Coal . . .	12	82,185		23,572		3,430	(b)	..	..	135,093
Crude petroleum including natural gas . . .	13	..	(b)	3,024			1,194	764	665	
Construction materials . .	14	13,615	5,400	4,796	(b)	..				..
Other non-metallic minerals	15	4,791	1,625	(b)	6,042	1,733	(b)	..	..	..
Total mining, excluding services to mining . . .		147,166	38,469	82,723	26,242	90,867	20,128	14,827	665	421,087
1969-70p										
Metallic minerals . . .	11	44,350	46,627	40,741	19,436	112,950	19,144	12,184	..	245,418
Coal . . .	12	89,502		29,100		3,031	(b)	..	..	174,258
Crude petroleum including natural gas . . .	13	..	(b)	5,704			1,289	1,023	699	
Construction materials . .	14	14,993	5,704	4,222	5,428	(b)				..
Other non-metallic minerals	15	7,198	2,071	(b)	7,122	3,703	(b)	..	..	..
Total mining, excluding services to mining . . .		156,043	67,120	80,789	30,770	125,112	20,814	13,207	699	494,554

(a) Australian Standard Industrial Classification.

(b) Not available for publication.



## Stocks

Statistics on the value of stocks at 30 June 1969 and 1970, are shown in the following table. Figures include stocks of materials, fuels, etc., and mine products and work-in-progress of the establishment whether located at the establishment or elsewhere.

MINING ESTABLISHMENTS: STOCKS AT 30 JUNE 1969 AND 1970  
BY INDUSTRY SUB-DIVISION, STATES AND TERRITORIES  
(\$'000)

Industry sub-division	ASIC code (a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
CLOSING STOCKS AT 30 JUNE 1969										
Metallic minerals . .	11	21,551	7,048	{ 11,462 5,663 }	{ 1,592	{ 23,993 9,121 (b)	{ 5,054 ..	{ .. ..	{ .. ..	72,600
Coal . .	12	11,676								
Crude petroleum including natural gas . .	13	..	2,242	{ (b) 1,193 }	{ 766 1,249 }	{ 2,415 1,711 }	{ 306 255 (b)	{ 43 ..	{ 78 ..	27,344
Construction materials . .	14	3,701								
Other non-metallic minerals . .	15	419								
Total mining, excluding services to mining . .		37,347	9,713	19,733	3,607	28,343	9,450	5,097	78	113,367
CLOSING STOCKS AT 30 JUNE 1970p										
Metallic minerals . .	11	20,923	9,332	{ 13,427 6,612 }	{ 1,927	{ 33,381 11,161 (b)	{ 5,018 ..	{ .. ..	{ .. ..	85,609
Coal . .	12	17,117								
Crude petroleum including natural gas . .	13	..	2,441	{ (b) 1,621 }	{ 811 1,730 }	{ 1,624 2,701 }	{ 259 1,387 (b)	{ 180 ..	{ 178 ..	35,344
Construction materials . .	14	4,227								
Other non-metallic minerals . .	15	524								
Total mining, excluding services to mining . .		42,791	12,264	22,757	4 468	39,093	11,466	5,198	178	138,215

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

## Value added

The following table shows value added, calculated as the value of turnover (sales plus transfers out and other operating revenue) and closing stocks less purchases plus transfers in and selected expenses and opening stocks.

MINING ESTABLISHMENTS: VALUE ADDED, BY INDUSTRY SUB-DIVISION  
STATES AND TERRITORIES, 1968-69 AND 1969-70  
(\$'000)

Industry sub-division	ASIC code (a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1968-69										
Metallic minerals . .	11	88,535	25,773	{ 100,241 31,386 }	{ 42,009	{ 138,838 41,524 (b)	{ 21,406 ..	{ .. ..	{ .. ..	429,583
Coal . .	12	106,987								
Crude petroleum including natural gas . .	13	..	22,566	{ (b) 8,789 }	{ 6,053 7,412 }	{ 36,649 7,744 }	{ 2,076 1,285 (b)	{ 794 ..	{ 976 ..	209,563
Construction materials . .	14	26,829								
Other non-metallic minerals . .	15	5,401								
Total mining, excluding services to mining . .		227,752	51,628	148,978	55,473	184,516	44,286	22,200	976	735,809
1969-70p										
Metallic minerals . .	11	120,292	75,552	{ 159,445 46,514 }	{ 47,300	{ 222,992 63,586 (b)	{ 24,739 ..	{ .. ..	{ .. ..	634,900
Coal . .	12	134,767								
Crude petroleum including natural gas . .	13	..	25,229	{ (b) 8,564 }	{ 6,563 7,676 }	{ 49,587 5,748 }	{ 1,484 3,075 (b)	{ 1,124 ..	{ 1,386 ..	314,410
Construction materials . .	14	31,857								
Other non-metallic minerals . .	15	6,771								
Total mining, excluding services to mining . .		293,687	103,276	221,842	61,539	281 402	65,888	25,863	1,386	1,054,878

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

**Fixed capital expenditure**

Figures in the following table relate to fixed capital expenditure. Such figures are calculated by deducting disposals of fixed tangible assets from the total outlay on new and second-hand tangible assets.

**MINING ESTABLISHMENTS: FIXED CAPITAL EXPENDITURE (OUTLAY ON FIXED TANGIBLE ASSETS LESS DISPOSALS) BY INDUSTRY SUB-DIVISION, STATES AND TERRITORIES**  
**1968-69 AND 1969-70**  
 (\$'000)

<i>Industry sub-division</i>	<i>ASIC code(a)</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1968-69										
Metallic minerals . . .	11	15,136	100,651	22,912	6,812	68,019	12,342	10,503	..	130,030
Coal . . .	12	25,535		13,229		(b)	(b)	..	..	..
Crude petroleum including natural gas . . .	13	..	2,428	(b)	711	6,267	..	..	..	151,615
Construction materials . . .	14	3,507		1,009		2,196	271	116	51	10,290
Other non-metallic minerals . . .	15	678		(b)		7,578	(b)	..	..	10,971
<b>Total mining, excluding services to mining . . .</b>		<b>44,857</b>	<b>103,816</b>	<b>38,808</b>	<b>7,786</b>	<b>84,060</b>	<b>12,910</b>	<b>10,618</b>	<b>51</b>	<b>302,905</b>
1969-70 P										
Metallic minerals . . .	11	18,074	89,533	36,146	10,705	73,985	20,091	13,117	..	164,040
Coal . . .	12	33,054		15,248		(b)	(b)	..	..	..
Crude petroleum including natural gas . . .	13	..	2,813	(b)	1,046	8,412	..	..	..	154,407
Construction materials . . .	14	7,513		1,396		1,577	362	538	175	15,419
Other non-metallic minerals . . .	15	1,404		(b)		8,737	(b)	..	..	12,728
<b>Total mining, excluding services to mining . . .</b>		<b>60,044</b>	<b>93,361</b>	<b>53,707</b>	<b>12,311</b>	<b>92,711</b>	<b>20,597</b>	<b>13,655</b>	<b>175</b>	<b>346,593</b>

(a) Australian Standard Industrial Classification.

(b) Not available for publication.

**Mineral production**

This section contains details of the output (quantities and values) of minerals during the year ended June 1970 for all States and Territories and Australia, together with information for Australia for the four preceding years. Figures for 1968-69 and 1969-70 are subject to revision.

It should be noted that details for the years 1966, 1967 and 1968 relate to a year ended December. The change in 1969 to a June year was made to bring mineral production statistics and the annual mining census (which in previous years also related to a December year) to the same time basis as the other economic censuses conducted during that year.

Minerals are classified into five major groups, namely metallic minerals, coal, crude petroleum (including natural gas), construction materials and other non-metallic minerals. In the statistics published in this section the minerals are arranged in these five groups.

The statistics are derived from information supplied in returns to the various State Mines Departments and this Bureau, supplemented in some cases by information made available by the Department of National Development and by data compiled by this Bureau from other sources.

**Scope of mineral statistics and relation to mining industry statistics**

The statistics of mineral production for the years ended June 1969 and 1970, apart from the change to a June year basis, are comparable with those for earlier years. Although the integration of the mining census for 1968-69 with other economic censuses conducted in that year (manufacturing, electricity and gas, retail trade, and wholesale trade) was accompanied by major changes in the scope of the mining census and thus in the scope of the mining industry statistics, these changes had little effect on the scope of the mineral production statistics now published. This is because mineral production data were collected, not only from establishments coming within the scope of the mining census as now defined, but also from those establishments classified as non-mining establishments which, as a subsidiary activity, carried out mining or quarrying activities (e.g. brick and cement manufacturing establishments extracting clays, limestone), and from itinerant and part-time miners.

However, as in past years, coverage is deficient in the case of some minerals, principally because of the difficulties in obtaining complete lists of producers and collecting satisfactory returns.

### Principles for measuring output of minerals

The quantities of individual minerals produced are recorded, in general, in the form in which the minerals are dispatched from the mine or from associated treatment works in the locality of the mine. Thus, for metallic minerals, the output is recorded as ore if no treatment is undertaken at or near the mine, and as concentrate if ore dressing operations are carried out in associated works in the locality of the mine. In addition to the basic quantity data, the content of metallic minerals (based on assay) are recorded. No allowance has been made for losses in smelting and refining and the quantities shown are therefore, in general, greater than the contents actually recoverable.

The output of individual minerals is valued at the mine or at associated treatment works in the locality of the mine. This valuation is derived, in general, by valuing the quantity produced during the year at the unit selling value (including any subsidy) less any transport costs from the mine or associated treatment works to the point of sale. For some metals, however, special values of output, based on actual or estimated realisations are supplied by certain large mineral producers.

It should be noted that, commencing with the year 1968-69, the output of metals by enterprises for their own consumption in Australia has been valued on a different basis to that used in previous years. The effect of these changes is that the overall value of coal produced in 1968-69 and 1969-70 is somewhat lower and the value of certain other minerals somewhat higher than if the earlier valuation methods had been retained.

### Quantity of minerals produced

The following tables show particulars of the quantities of minerals produced during 1969-70 and earlier years.

#### QUANTITY OF MINERALS PRODUCED: STATES AND TERRITORIES, 1969-70

Mineral		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
METALLIC MINERALS										
Antimony concentrate(a)	tons	150	..	197	..	..	..	..	..	347
Bauxite	'000 tons	11	1	5,290	..	2,861	..	..	..	8,163
Beryllium ore	tons	3	..	..	..	(b)	..	..	..	(b)
Bismuth concentrate	"	..	..	40	..	1	..	1,699	..	1,740
Copper concentrate(c)	"	45,269	28	387,492	828	3,442	71,958	27,676	..	536,693
Copper ore(d)	"	(e)7,694	1,066	55,017	10,557	326	2,291	3,576	..	80,527
Gold—										
Bullion	oz	239	10,167	54,156	..	542,139	134	87,748	..	694,583
Ore	tons	..	..	..	900	..	..	..	..	900
Iron ore	'000 tons	..	..	..	7,308	34,130	(f)2,045	1,023	..	44,507
Iron oxide(g)	tons	26,866	395	20,258	..	..	10,179	..	..	57,698
Lead concentrate	"	359,759	..	307,390	..	271	12,879	1,595	..	681,894
Lead-copper concentrate	"	..	..	..	..	..	13,304	..	..	13,304
Lead ore(h)	"	3,623	..	36,993	83	..	..	..	..	40,699
Lead-zinc middlings	"	37,350	..	..	..	..	..	..	..	37,350
Manganese ore	"	..	..	..	369	152,209	..	627,684	..	780,262
Mineral sands—										
Ilmenite concentrate	"	11,086	..	88,054	..	677,743	..	..	..	776,883
Leucoxene concentrate	"	..	..	..	..	9,402	..	..	..	9,402
Monazite concentrate	"	402	..	107	..	3,550	..	..	..	4,059
Rutile concentrate	"	226,420	..	130,160	..	2,441	7,136	..	..	366,157
Xenotime concentrate	"	..	..	..	..	101	..	..	..	101
Zircon concentrate	"	217,966	..	90,748	..	54,537	7,507	..	..	370,758
Molybdenite concentrate	"	..	..	115	..	..	..	..	..	115
Nickel concentrate	"	..	..	..	..	157,555	..	..	..	157,555
Pyrite concentrate	"	..	..	21,585	53,928	10,863	65,938	..	..	152,314
Tantalite-columbite concentrate	lb	..	..	..	..	101,267	..	..	..	101,267
Tin concentrate(i)	tons	2,936	12	2,049	..	895	12,703	93	..	18,688
Tungsten concentrates—										
Scheelite concentrate	"	..	..	9	..	..	1,375	..	..	1,384
Wolfram concentrate	"	2	..	242	..	..	776	22	..	1,042
Zinc concentrate	"	612,537	..	176,594	..	..	84,615	2,007	..	875,753

For footnotes see next page.

## QUANTITY OF MINERALS PRODUCED: STATES AND TERRITORIES, 1969-70—continued

Mineral		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
COAL										
Black coal—	'000 tons	34,952	..	9,417	2,121	1,159	110	..	..	47,759
Semi-anthracite	..	..	..	..	..	..	2	..	..	2
Bituminous	..	34,952	..	9,027	..	..	108	..	..	44,087
Sub-bituminous	..	..	..	390	2,121	1,159	..	..	..	3,670
Brown coal (lignite)(j)	..	..	23,927	..	..	..	..	..	..	23,927
Brown coal briquettes	..	..	1,541	..	..	..	..	..	..	1,541

## CRUDE PETROLEUM (INCLUDING NATURAL GAS)(k)

Crude oil	'000 bls	..	13,474	1,586	..	15,583	..	..	..	30,643
Natural gas (includes commercial gas and gas for field usage)	mil. cu ft	..	9,668	6,326	8,958	302	..	..	..	25,254
Natural gas condensate	bls	..	..	839	..	..	..	..	..	839
Other derivatives—										
Commercial ethane	mil. cu ft	..	17	..	..	..	..	..	..	17
Liquefied petroleum gases (LPG)—										
Commercial propane	'000 bls	..	98	..	..	..	..	..	..	98
Commercial butane	..	..	137	..	..	..	..	..	..	137

## CONSTRUCTION MATERIALS(l)

Sand	'000 tons	6,070	5,169	1,981	2,825	n.a.	198	} 954	281	{ 16,584
Gravel	..	3,531	2,753	2,121	997	n.a.	1,315			
Dimension stone	..	24	8	(b)	51	174	2			
Crushed and broken stone	..	10,128	15,207	3,129	10,727	4,280	1,306	} 338	637	{ 45,739
Other (decomposed rock, etc.)	..	22,638	1,664	(b)	1,489	..	120			

## OTHER NON-METALLIC MINERALS

Asbestos	short tons	794	..	..	..	30	..	..	..	824
Barite	..	315	..	..	38,611	419	..	..	..	39,345
Clays—										
Brick and shale	'000 tons	3,272	1,481	470	579	1,105	136	..	..	7,041
Other(m)	..	557	280	208	114	226	63	..	..	1,447
Diatomite	tons	2,226	..	462	..	..	..	..	..	2,688
Dolomite	..	7,519	..	13,955	305,191	..	3,424	..	..	330,089
Felspar (including cornish stone)	..	1,597	..	..	1,389	604	..	..	..	3,590
Fluorspar	..	..	609	..	..	..	..	..	..	609
Garnet concentrate	..	21	..	310	..	..	..	..	..	331
Gypsum	..	33,329	50,058	..	675,423	69,638	..	..	..	828,448
Limestone (including shell and coral)	'000 tons	2,983	2,283	1,261	1,768	1,511	537	..	..	10,344
Lithium ores	tons	..	..	..	..	765	..	..	..	765
Lithia (Li <sub>2</sub> O) content	units(n)	..	..	..	..	3,213	..	..	..	3,213
Magnesite, crude	tons	23,042	..	..	125	..	..	..	..	23,167
Mineral pigments—red ochre	..	..	..	..	..	41	..	..	..	41
Peat(o)	..	2,268	..	..	..	803	155	..	..	3,226
Pebbles—for grinding	..	..	..	..	22	..	1,307	..	..	1,329
Perlite	..	..	..	1,377	..	..	..	..	..	1,377
Phosphate rock	..	..	..	..	18,171	..	..	..	..	18,171
Pyrophyllite	..	5,000	..	..	..	..	..	..	..	5,000
Salt	'000 tons	..	(b)	(b)	556	1,015	..	..	..	2,021
Silica	tons	321,907	112,740	211,133	49,195	34,724	44,407	..	..	774,106
Sillimanite	..	894	..	..	262	..	..	..	..	1,156
Talc (including steatite and chlorite)	..	2,058	..	..	15,665	41,388	..	..	..	59,111

(a) Includes antimony ore. (b) Not available for publication. (c) Includes copper precipitate. (d) Includes cupreous ore for fertiliser. (e) Includes copper slag. (f) Iron concentrate. (g) For cement manufacture, coal washing, flux and gas purification. (h) Includes silver-lead ore, silver-lead slimes and lead slag. (i) Includes tin-copper concentrate. (j) Includes brown coal used for briquette production. (k) Source: Department of National Development and State Mines Departments. (l) Incomplete, see individual States. (m) Incomplete, owing to difficulties of coverage. (n) 1 unit = 22.4 lb. (o) Comprises peat for fertiliser and peat moss.

NOTE. Particulars of the production of uranium concentrate are not available for publication.



## QUANTITY OF MINERALS PRODUCED: AUSTRALIA, 1966 TO 1969-70

<i>Mineral</i>		1966	1967	1968	1968-69(a)	1969-70(a)
METALLIC MINERALS						
Antimony concentrate(b)	tons	150	154	244	261	347
Bauxite	'000 tons	1,798	4,176	4,877	6,217	8,163
Beryllium ore	tons	52	55	15	14	(c)
Bismuth concentrate	"	1	106	1,553	1,528	1,740
Chromite	"	..	138	86	..	..
Copper concentrate(d)	"	478,710	392,679	452,100	493,037	536,693
Copper ore(e)	"	53,463	31,453	(f)39,202	(f)46,095	(f)80,527
Gold—						
Bullion	oz	1,078,587	997,793	908,286	809,100	694,583
Ore	tons	..	6	6	6	900
Iron ore	'000 tons	10,893	17,036	(g)26,204	(g)32,027	(g)44,507
Iron oxide(h)	tons	48,374	53,000	63,093	46,146	57,698
Lead concentrate	"	515,573	537,193	601,709	638,717	681,894
Lead-copper concentrate	"	12,083	12,227	12,558	12,827	13,304
Lead ore(i)	"	22,605	18,224	51,461	52,410	40,699
Lead-zinc middlings	"	10,870	14,685	5,373	3,246	37,350
Manganese ore	"	312,540	559,967	732,077	833,818	780,262
Mineral sands—						
Ilmenite concentrate	"	513,011	544,216	551,501	656,693	776,883
Leucoxene concentrate	"	756	696	1,607	8,730	9,402
Monazite concentrate	"	1,984	2,313	2,055	4,228	4,059
Rutile concentrate	"	243,858	265,514	287,617	311,662	366,157
Xenotime concentrate	"	..	18	18	38	101
Zircon concentrate	"	235,649	283,682	294,195	341,720	370,758
Molybdenite concentrate	"	4	..	10	47	115
Nickel concentrate	"	..	15,753	36,880	51,140	157,555
Osmiridium—native	oz	..	..	12	..	..
Pyrite concentrate	tons	245,998	252,748	165,265	132,804	152,314
Tantalite-columbite concentrate	lb	10,550	79,587	238,134	202,868	101,267
Tin concentrate(j)	tons	7,604	8,557	11,297	13,889	18,688
Tungsten concentrates—						
Scheelite concentrate	"	1,308	1,202	1,465	1,563	1,384
Wolfram concentrate	"	498	448	559	734	1,042
Zinc concentrate	"	638,788	702,792	718,311	785,942	875,753
Zinc ore	"	(k)325	(k)198	2,700	11,200	..
COAL						
Black coal	'000 tons	33,334	34,707	40,183	42,650	47,759
Semi-anthracite	"	45	38	31	22	2
Bituminous	"	30,045	31,299	36,665	39,008	44,087
Sub-bituminous	"	3,243	3,370	3,488	3,621	3,670
Brown coal (lignite)(l)	"	21,783	23,384	22,971	23,128	23,927
Brown coal briquettes	"	1,857	1,849	1,553	1,471	1,541
CRUDE PETROLEUM (INCLUDING NATURAL GAS)						
Crude oil	'000 bls	3,390	7,600	13,877	14,066	30,643
Natural gas (includes commercial gas and gas for field usage)	mil. cu ft	143	152	216	2,874	25,254
Natural gas condensate	bls	121	..	..	5	839
Other derivatives—						
Commercial ethane	mil. cu ft	..	..	..	..	17
Liquefied petroleum gases (LPG)—						
Commercial propane	'000 bls	..	..	..	..	98
Commercial butane	'000 bls	..	..	..	..	137

For footnotes see next page.

QUANTITY OF MINERALS PRODUCED: AUSTRALIA, 1966 TO 1969-70—*continued*

<i>Mineral</i>		1966	1967	1968	1968-69(a)	1969-70(a)
CONSTRUCTION MATERIALS(m)						
Sand . . . . .	'000 tons	10,666	11,149	14,406	16,711	16,584
Gravel . . . . .	" "	8,549	9,048	8,340	10,343	11,609
Dimension stone . . . . .	" "	241	286	275	286	269
Crushed and broken stone . . . . .	" "	46,796	46,268	44,375	42,925	45,739
Other . . . . .	" "	22,216	25,202	26,581	23,376	26,793
OTHER NON-METALLIC MINERALS						
Asbestos . . . . .	short tons	13,468	600	897	821	824
Barite . . . . .	tons	13,724	15,666	39,155	45,579	39,345
Clays—						
Brick and shale . . . . .	'000 tons	5,187	5,697	6,422	7,154	7,041
Other(m) . . . . .	" "	952	961	1,396	1,275	1,447
Diatomite . . . . .	tons	7,592	11,103	6,725	2,643	2,688
Dolomite . . . . .	" "	256,008	290,659	316,731	305,644	330,089
Felspar (including cornish stone) . . . . .	" "	7,259	4,450	4,838	5,742	3,590
Garnet concentrate . . . . .	" "	239	591	167	322	331
Gypsum . . . . .	" "	801,552	914,084	843,744	894,560	828,448
Limestone (including shell and coral) . . . . .	'000 tons	7,730	8,355	8,470	9,078	10,344
Lithium ores . . . . .	tons	933	667	738	817	765
Lithia (Li <sub>2</sub> O) content . . . . .	units(n)	3,919	2,906	3,112	3,443	3,213
Loam—for foundry moulding . . . . .	tons	9,506	(o)	(o)	(o)	(o)
Magnesite, crude . . . . .	" "	19,556	23,653	23,146	23,343	23,167
Mineral pigments—red ochre . . . . .	" "	272	358	526	654	41
Peat(p) . . . . .	" "	..	..	..	2,134	3,226
Pebbles—for grinding . . . . .	" "	1,043	1,305	1,321	1,100	1,329
Perlite . . . . .	" "	1,544	1,389	1,049	795	1,377
Phosphate rock . . . . .	" "	5,715	11,770	5,744	10,557	18,171
Pyrophyllite . . . . .	" "	..	..	501	1,933	5,000
Salt . . . . .	'000 tons	645	703	900	1,001	2,021
Silica . . . . .	" "	347,123	443,555	542,680	618,427	774,106
Sillimanite . . . . .	" "	2,664	1,183	2,115	1,908	1,156
Talc (including steatite and chlorite) . . . . .	" "	17,327	17,779	38,280	41,506	59,111

(a) Year ended 30 June. (b) Includes antimony ore. (c) Not available for publication. (d) Includes copper precipitate. (e) Includes cupreous ore for fertiliser. (f) Includes copper slag. (g) Includes iron concentrate. (h) For cement manufacture, coal washing, flux and gas purification. (i) Includes silver-lead ore, silver-lead slimes and lead slag. (j) Includes tin-copper concentrate. (k) Zinc ore for fertiliser. (l) Includes brown coal used for briquette production. (m) Incomplete, owing to difficulties of coverage. (n) 1 unit = 22.4 lb. (o) Included in silica. (p) Comprises peat for fertiliser and peat moss.

NOTE. Particulars of the production of uranium concentrate are not available for publication.

### Contents of metallic minerals produced

In the foregoing tables the section headed "Metallic Minerals" contains statistics of ores and concentrates produced. The following tables contain statistics of the metallic content of these ores and concentrates. The figures are the result of assays carried out on the ores and concentrates and may not represent the ultimate yield of metals produced after smelting and refining.

**CONTENTS OF METALLIC MINERALS PRODUCED  
STATES AND NORTHERN TERRITORY, 1969-70**

<i>Content of metallic minerals produced</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Aust.</i>
Alumina (Al <sub>2</sub> O <sub>3</sub> ) . . . . .	'000 tons 4	1	3,095	..	1,058	..	..	4,158
Antimony . . . . .	tons 920	..	34	..	..	..	..	954
Beryllium oxide (BeO) . . . . .	units(a) 30	..	..	..	(b)	..	..	(b)
Bismuth . . . . .	lb ..	..	21,101	..	1,196	..	421,420	443,717
Cadmium . . . . .	tons 1,233	..	..	..	..	76	9	1,318
Cobalt . . . . .	.. 136	..	..	..	170	..	..	306
Copper . . . . .	.. 15,550	41	93,363	245	2,565	21,333	6,858	139,955
Gold . . . . .	fine oz 10,570	8,671	77,942	933	397,135	43,558	123,840	662,649
Iron(c) . . . . .	'000 tons ..	..	..	4,649	21,514	(d)1,419	640	28,223
Lead . . . . .	tons 285,877	..	150,339	9	179	14,766	932	452,102
Manganese(e) . . . . .	.. 6,080	..	..	..	76,612	259	307,331	390,282
Manganese dioxide (MnO <sub>2</sub> )(f) . . . . .	.. ..	..	..	109	..	..	..	109
Mercury . . . . .	lb ..	..	..	..	..	3,231	..	3,231
Molybdenum disulphide (MoS <sub>2</sub> ) . . . . .	.. ..	..	218,960	..	..	..	..	218,960
Monazite . . . . .	tons 361	..	100	..	3,195	..	..	3,656
Nickel . . . . .	.. ..	..	..	..	17,762	..	..	17,762
Platinum . . . . .	oz ..	..	..	..	592	..	..	592
Silver . . . . .	'000 fine oz 10,996	..	14,393	1	118	1,774	216	27,497
Sulphur(g) . . . . .	tons 248,838	..	10,801	23,189	4,982	66,272	1,588	355,670
Tantalite-columbite (Ta <sub>2</sub> O <sub>5</sub> + Nb <sub>2</sub> O <sub>5</sub> ) . . . . .	lb ..	..	..	..	63,917	..	..	63,917
Tin . . . . .	tons 1,715	9	1,265	..	609	5,040	57	8,695
Titanium dioxide (TiO <sub>2</sub> ) . . . . .	.. 222,350	..	169,709	..	391,643	6,741	..	790,443
Tungstic oxide (WO <sub>3</sub> ) . . . . .	units(a) 156	..	17,593	..	..	154,550	930	173,229
Yttrium oxide (Y <sub>2</sub> O <sub>3</sub> ) . . . . .	lb ..	..	..	..	47,187	..	..	47,187
Zinc . . . . .	tons 345,296	..	91,324	..	..	50,449	1,107	488,176
Zirconium dioxide (ZrO <sub>2</sub> ) . . . . .	.. 145,072	..	60,378	..	35,696	4,949	..	246,095

(a) 1 unit = 22.4 lb. (b) Not available for publication. (c) Excludes iron content of iron oxide not intended for metal extraction. (d) Contained in iron concentrate. (e) Content of metallurgical grade manganese ore and zinc concentrate. (f) Content of manganese ore of other than metallurgical grade. (g) Sulphur content of pyrite and other minerals from which sulphur is recovered.

NOTE. Particulars of production of uranium oxide (U<sub>3</sub>O<sub>8</sub>) are not available for publication.

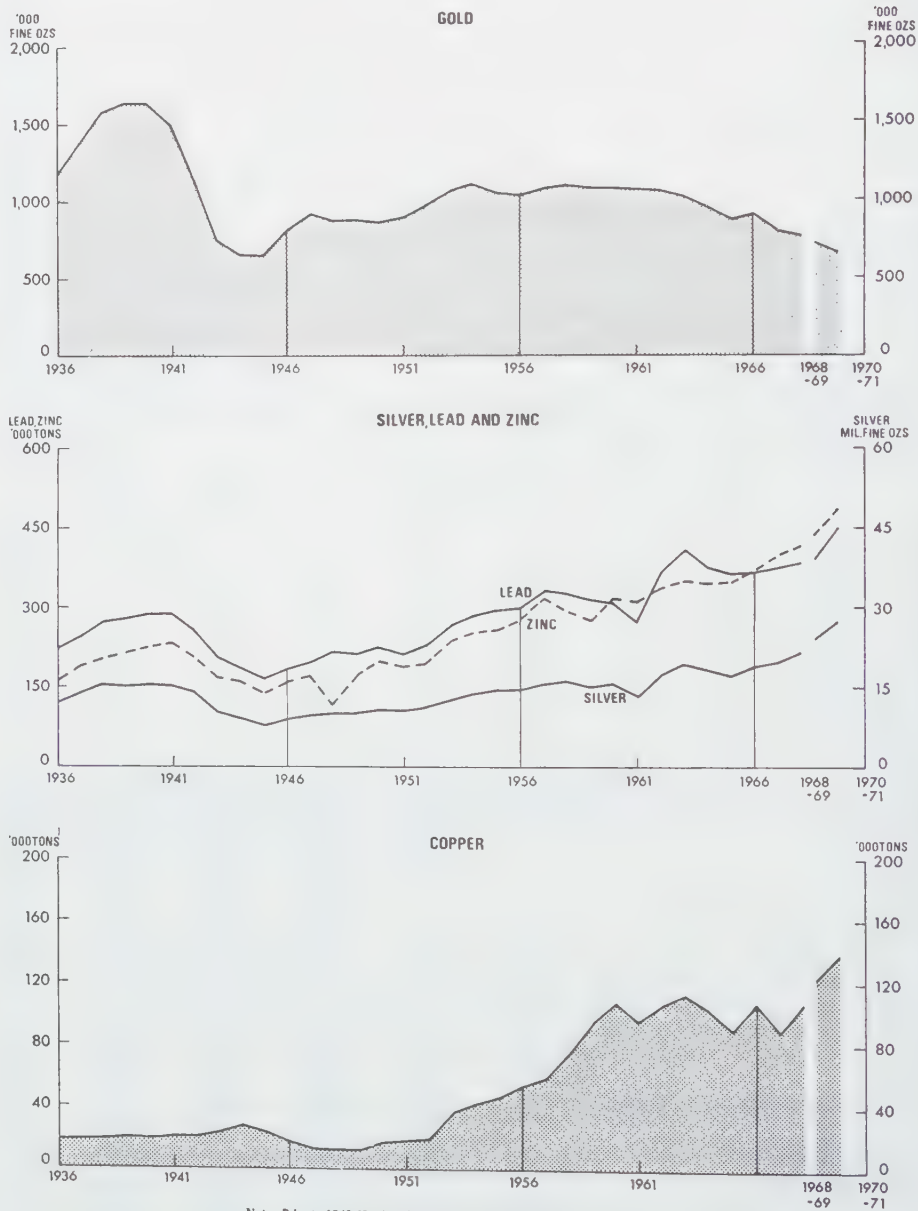
**CONTENTS OF METALLIC MINERALS PRODUCED: AUSTRALIA, 1966 TO 1969-70**

<i>Content of metallic minerals produced</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1968-69 (a)</i>	<i>1969-70 (a)</i>
Alumina (Al <sub>2</sub> O <sub>3</sub> ) . . . . .	'000 tons 939	2,258	2,633	3,207	4,158
Antimony . . . . .	tons 971	930	842	854	954
Beryllium oxide (BeO) . . . . .	units(b) 637	675	178	123	(c)
Bismuth . . . . .	lb 717	25,536	403,200	421,680	443,717
Cadmium . . . . .	tons 1,212	1,324	1,359	1,210	1,318
Chromic oxide (Cr <sub>2</sub> O <sub>3</sub> ) . . . . .	.. ..	44	27	..	..
Cobalt . . . . .	.. 84	146	235	212	306
Copper . . . . .	.. 109,537	90,361	107,906	122,789	139,955
Gold . . . . .	fine oz 916,985	805,336	781,782	729,565	662,649
Iron(d) . . . . .	'000 tons 6,956	10,928	(e)16,920	(e)20,502	(e)28,223
Lead . . . . .	tons 364,898	375,779	382,671	391,534	452,102
Manganese(f) . . . . .	.. 151,401	264,660	345,099	372,525	390,282
Manganese dioxide (MnO <sub>2</sub> )(g) . . . . .	.. 4,091	228	134	148	109
Mercury . . . . .	lb ..	4,204	2,147	3,452	3,231
Molybdenum disulphide (MoS <sub>2</sub> ) . . . . .	.. 5,549	..	19,164	89,624	218,960
Monazite . . . . .	tons 1,836	2,163	1,849	3,784	3,656
Nickel . . . . .	.. ..	2,061	4,603	6,086	17,762
Osmiridium . . . . .	oz ..	..	12	..	..
Palladium . . . . .	.. ..	..	..	352	..
Platinum . . . . .	.. 13	..	..	519	592
Silver . . . . .	'000 fine oz 18,888	19,842	21,394	22,410	27,497
Sulphur(h) . . . . .	tons 371,567	392,371	349,990	313,836	355,670
Tantalite-columbite (Ta <sub>2</sub> O <sub>5</sub> + Nb <sub>2</sub> O <sub>5</sub> ) . . . . .	lb 5,698	32,906	56,179	17,645	63,917
Tin . . . . .	tons 4,807	5,586	6,537	7,411	8,695
Titanium dioxide (TiO <sub>2</sub> ) . . . . .	.. 516,745	552,894	578,720	666,050	790,443
Tungstic oxide (WO <sub>3</sub> ) . . . . .	units(a) 130,776	119,210	144,552	163,111	173,229
Yttrium oxide (Y <sub>2</sub> O <sub>3</sub> ) . . . . .	lb ..	9,475	9,500	16,312	47,187
Zinc . . . . .	tons 369,341	400,527	415,722	437,385	488,176
Zirconium dioxide (ZrO <sub>2</sub> ) . . . . .	.. 156,581	188,462	195,585	231,234	246,095

(a) Year ended 30 June. (b) 1 unit = 22.4 lb. (c) Not available for publication. (d) Excludes iron content of iron oxide not intended for metal extraction. (e) Includes iron contained in iron concentrate. (f) Content of metallurgical grade manganese ore and zinc concentrate. (g) Content of manganese ore of other than metallurgical grade. (h) Sulphur content of pyrite and other minerals from which sulphur is recovered.

NOTE. Particulars of production of uranium oxide (U<sub>3</sub>O<sub>8</sub>) are not available for publication.

MINE PRODUCTION OF PRINCIPAL METALS: AUSTRALIA  
(METALLIC CONTENT OF MINERALS)  
1936 TO 1969-70

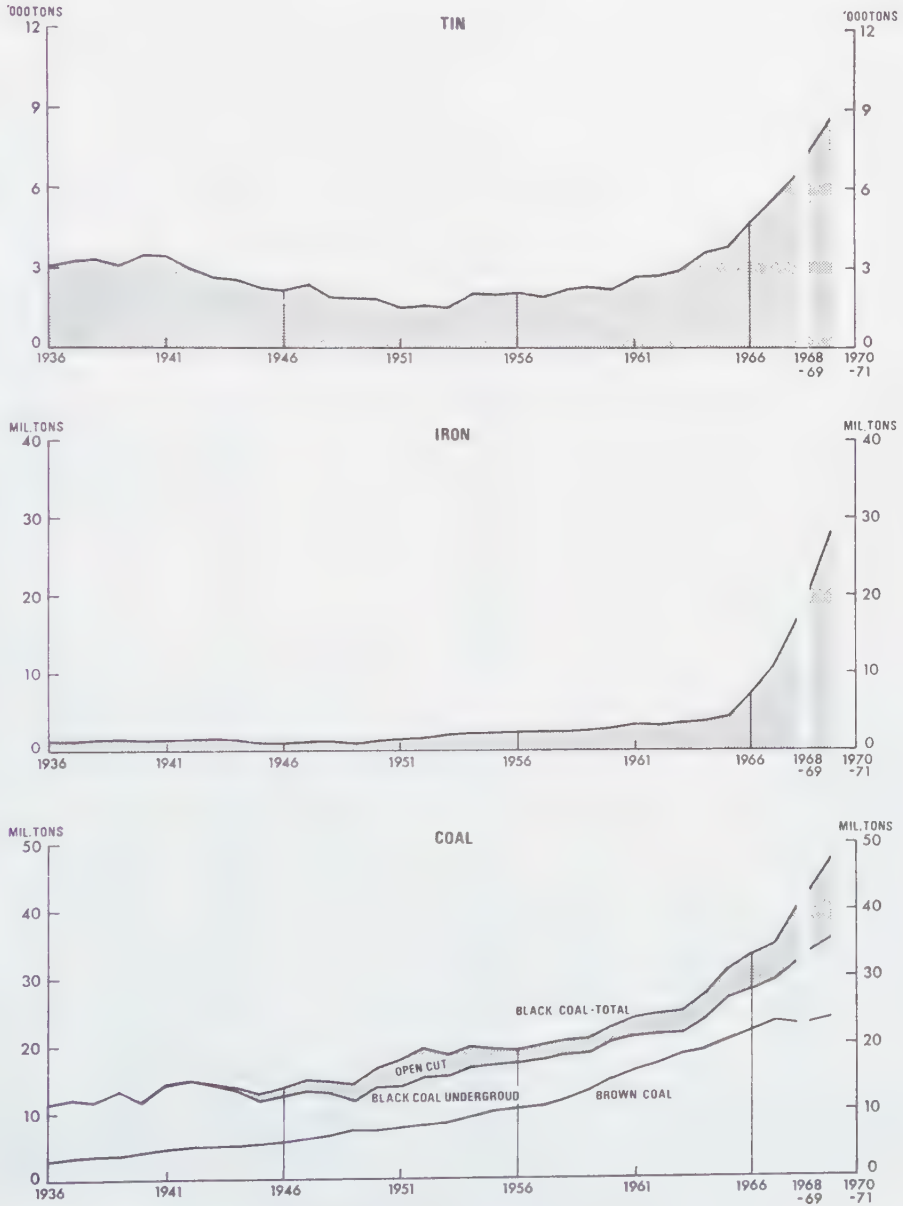




# MINE PRODUCTION OF PRINCIPAL METALS AND PRODUCTION OF COAL

(METALLIC CONTENT OF MINERALS)

AUSTRALIA, 1936 TO 1969-70



Note. Prior to 1968-69 mineral figures were collected on a calendar year basis.

## Value of minerals produced

The following table shows the value of minerals produced in 1969-70 and earlier years.

VALUE OF MINERALS PRODUCED: AUSTRALIA, 1966 TO 1969-70  
(\$'000)

Mineral	1966	1967	1968	1968-69(a)	1969-70(a)
METALLIC MINERALS					
Antimony—					
Concentrate . . . . . }	43	54	83	83	84
Ore . . . . . }	(b)	(b)	(b)	(b)	1
Bauxite . . . . . }	14	21	7	7	(b)
Beryllium ore . . . . . }	2	139	1,979	2,087	2,441
Bismuth concentrate . . . . . }	..	7	4	..	..
Chromite . . . . . }					
Copper—					
Concentrate . . . . . }	87,523	72,515	(c)92,396	103,651	145,268
Ore . . . . . }				(c)2,334	(c)2,816
Ore for fertiliser . . . . . }				80	56
Precipitate . . . . . }				352	230
Gold—					
Bullion(d) . . . . . }	26,371	24,456	23,525	22,953	19,945
Ore . . . . . }	..	..	..	..	26
Iron ore . . . . . }	41,728	82,994	131,482	193,435	259,608
Iron oxide . . . . . }	289	501	578	542	645
Lead concentrate . . . . . }	76,831	73,654	89,705	80,556	99,507
Lead-copper concentrate . . . . . }				4,043	4,760
Lead ore(e) . . . . . }				797	464
Lead-zinc middlings . . . . . }				303	3,032
Manganese ore . . . . . }	3,462	8,007	8,358	10,734	9,680
Mineral sands(f)—					
Ilmenite concentrate . . . . . }	4,242	4,390	4,572	5,380	6,638
Leucoxene concentrate . . . . . }	29	33	70	358	420
Monazite concentrate . . . . . }	203	289	237	501	493
Rutile concentrate . . . . . }	17,088	19,615	21,528	23,388	31,246
Xenotime concentrate . . . . . }	..	45	45	76	119
Zircon concentrate . . . . . }	8,255	10,937	10,967	11,481	11,827
Molybdenite concentrate . . . . . }	6	..	(b)	76	175
Nickel concentrate . . . . . }	..	(b)	(b)	(b)	(b)
Osmiridium-native . . . . . }	..	..	2	..	..
Pyrite concentrate . . . . . }	(b)	(b)	1,842	1,713	1,473
Tantalite-columbite					
Concentrate . . . . . }	19	(b)	(b)	261	276
Tin concentrate . . . . . }	14,332	15,011	16,691	19,215	26,773
Tin-copper concentrate . . . . . }	..	..	(b)	469	915
Tungsten concentrates . . . . . }	4,469	4,509	5,514	6,723	8,753
Zinc concentrate . . . . . }				35,285	45,896
Zinc ore . . . . . }	32,890	29,354	30,398	112	..
Zinc ore for fertiliser . . . . . }				..	..
Total metallic minerals . . . . .	327,633	370,892	468,172	562,981	762,134
COAL					
Black coal . . . . .	151,380	160,099	188,785	198,713	242,014
Brown coal (lignite) . . . . .	20,064	20,686	21,555	20,880	21,165
Total coal . . . . .	171,444	180,785	210,340	219,593	263,179
CRUDE PETROLEUM (INCLUDING NATURAL GAS)					
Crude petroleum (including natural gas) . . . . .	9,229	21,286	39,307	40,513	87,020

VALUE OF MINERALS PRODUCED: AUSTRALIA, 1966 TO 1969-70—continued  
(\$'000')

Mineral	1966	1967	1968	1968-69(a)	1969-70(a)
CONSTRUCTION MATERIALS					
Construction materials(g) . . . . .	83,449	91,789	96,812	115,062	130,437
OTHER NON-METALLIC MINERALS					
Asbestos . . . . .	2,224	108	181	180	174
Barite . . . . .	199	214	410	409	437
Clay—					
Brick clay and shale . . . . .	6,004	6,472	7,042	6,905	7,073
Other clays . . . . .	1,650	1,729	2,122	1,808	2,334
Diatomite . . . . .	62	71	52	21	21
Dolomite . . . . .	579	674	720	699	825
Felspar (including cornish stone) . . . . .	81	43	42	57	49
Fluorspar . . . . .	..	..	..	..	14
Garnet concentrate . . . . .	4	4	2	5	4
Gems(h) . . . . .	5,064	4,605	6,575	9,260	14,541
Gypsum . . . . .	2,006	2,119	2,171	2,284	2,198
Limestone (including shell and coral) . . . . .	10,277	11,700	11,963	13,364	14,657
Lithium ores . . . . .	14	9	9	13	12
Loam—for foundry moulding . . . . .	17	(i)	(i)	(i)	(i)
Magnesite, crude . . . . .	196	256	228	238	272
Mineral pigments—red ochre . . . . .	3	5	7	10	1
Peat(j) . . . . .	n.a.	n.a.	n.a.	26	59
Pebbles—for grinding . . . . .	19	22	23	17	24
Perlite . . . . .	3	3	7	5	14
Phosphate rock . . . . .	23	47	23	42	73
Pyrophyllite . . . . .	..	..	7	22	45
Salt . . . . .	2,626	2,769	3,600	4,474	8,497
Silica . . . . .	533	772	1,038	1,486	2,542
Sillimanite . . . . .	58	29	47	44	30
Talc (including steatite and chlorite) . . . . .	278	295	657	617	946
Total other non-metallic minerals . . . . .	31,921	31,946	36,928	41,987	54,841
TOTAL					
Total, all minerals and construction materials . . . . .	623,678	696,701	851,562	980,134	1,297,610
Of which—					
New South Wales . . . . .	262,358	274,123	298,392	314,802	383,743
Victoria . . . . .	53,075	57,339	59,026	58,648	99,234
Queensland . . . . .	138,483	135,379	185,753	209,432	277,675
South Australia . . . . .	41,954	40,449	42,064	72,325	85,617
Western Australia . . . . .	78,918	134,319	195,316	234,854	339,879
Tasmania . . . . .	34,561	34,688	44,968	59,191	77,554
Northern Territory . . . . .	13,283	19,316	24,846	29,332	32,373
Australian Capital Territory . . . . .	1,046	1,087	1,195	1,550	1,535

(a) Year ended 30 June. (b) Not available for publication. (c) Includes value of copper slag. (d) Includes alluvial gold. (e) Includes value of silver-lead ore, silver-lead slimes and lead slag. (f) Excludes rutile-zircon concentrates shipped interstate for final separation. (g) Incomplete owing to difficulties of coverage in some States. (h) Mainly opals and sapphires. (i) Included in silica. (j) Comprises peat for fertiliser and peat moss.

## Overseas participation in Australian mining industry

For the latest information available concerning overseas ownership and control in Australian mining industry see Year Book No. 57, pages 932-5.

### Mineral exploration (other than for petroleum)

#### Definition

Mineral exploration (other than for petroleum) consists of the search for, and/or appraisal of, new ore occurrences and known deposits of minerals (including extensions to deposits being worked) by geological, geophysical, geochemical, and other methods (including drilling). Exploration for water is excluded. The construction of shafts and adits is included if primarily for exploration purposes. Excluded are mine development activities (which include the construction of drives, shafts, winzes, etc.) in underground mines and the preparation of quarrying sites for open-cut extraction (including overburden removal) carried out primarily for the purpose of commencing or extending mining and quarrying operations. Mine development activities (including mines under development) are included in the scope of the annual mining census.

#### Sources of statistics

The statistics of exploration for minerals *other than petroleum* are derived from the annual mineral exploration census (excluding petroleum exploration), which is carried out by this Bureau in association with some State Mines Departments.

#### Period covered

For 1968 and earlier years the annual mineral exploration census (excluding petroleum exploration) related to years ended 31 December. As from 1968-69, the reporting period for this census has related to years ended 30 June, to conform with a similar change in the annual mining census. It should be noted that data for the six months ended 31 December 1968 are included in both the 1968 and 1968-69 figures in these tables.

#### Scope of mineral exploration census

The scope of the census comprises the following activities.

(a) *Private exploration on production leases*—relates to exploration carried out *on the production lease* by privately operated mines currently producing or under development for production of minerals other than petroleum. This also includes particulars of exploration within their production leases by business undertakings operated by State government authorities. Mines included in this section of the mineral exploration census are also included in the annual mining census with the exception of a limited number of itinerant prospectors and small mines for which information was not collected.

(b) *Private exploration on other licensed areas*—relates to exploration carried out on areas covered by exploration licences, authorities to enter, authorities to prospect, and similar licences and authorities issued by State Governments for exploration for minerals other than petroleum.

(c) *Other private exploration*—relates to exploration for minerals other than petroleum, which is not directly connected with areas under lease, licence, etc., including general surveys, aerial surveys, report writing, map preparation and other off-site activities not directly attributable to particular leases or licence areas.

(d) *Exploration by government*—relates to exploration for minerals other than petroleum carried out by—

- (i) Commonwealth Government (Bureau of Mineral Resources, Geology and Geophysics, and Joint Coal Board), and
- (ii) State Mines Departments.

Prior to 1968 the scope of the census was limited to private exploration on lease or licence areas held for production and exploration purposes, and all Government exploration. The scope was broadened for the 1968 census to include other private exploration activity as described in (c) above.



**Employment in mineral exploration**

In censuses prior to 1970-71 employment data were classified to one of the two categories: 'professional persons', and 'non-professional persons'. Employment data for working proprietors and working partners were, however, included in either of these categories. In 1970-71 separate details of man-weeks worked by 'working proprietors and working partners' were collected and details for 1970-71 are shown separately in the table on page 930.

**Expenditure, employment, footage drilled, etc., States and Northern Territory**

The following table shows expenditure, employment and footage drilled, etc., on mineral exploration other than for petroleum in each State and the Northern Territory during the years 1967 to 1970-71.

**MINERAL EXPLORATION (OTHER THAN FOR PETROLEUM)  
STATES AND NORTHERN TERRITORY, 1967 TO 1970-71**

EXPENDITURE(a) (S'000)					
	1967(b)(c)	1968(c)	1968-69	1969-70	1970-71
PRIVATE EXPLORATION					
New South Wales . . . . .	4,594	5,620	7,272	16,562	21,238
Victoria . . . . .	1,452	1,476	1,600	2,353	1,853
Queensland . . . . .	11,657	13,343	18,018	25,078	32,662
South Australia . . . . .	1,203	2,661	2,961	5,760	6,220
Western Australia . . . . .	10,203	23,148	35,412	59,821	86,082
Tasmania . . . . .	2,180	2,059	2,408	3,299	4,397
Northern Territory . . . . .	3,532	4,156	4,891	5,241	8,610
<i>Total</i> . . . . .	<i>34,822</i>	<i>52,463</i>	<i>72,562</i>	<i>118,115</i>	<i>161,063</i>
GOVERNMENT EXPLORATION					
Commonwealth(d) . . . . .	2,803	3,529	3,591	3,995	3,928
State Mines Departments . . . . .	1,768	2,329	2,939	2,708	3,386
<i>Total</i> . . . . .	<i>4,571</i>	<i>5,858</i>	<i>6,530</i>	<i>6,704</i>	<i>7,314</i>
TOTAL EXPENDITURE					
On drilling . . . . .	15,490	20,448	26,196	33,522	45,106
Other . . . . .	23,903	37,873	52,896	91,296	123,272
<b>Australia</b> . . . . .	<b>39,393</b>	<b>58,321</b>	<b>79,092</b>	<b>124,818</b>	<b>168,377</b>
Payments to contractors(e) . . . . .	12,181	18,506	27,721	40,969	54,578

For footnotes see next page.

**MINERAL EXPLORATION (OTHER THAN FOR PETROLEUM): STATES AND  
NORTHERN TERRITORY, 1967 TO 1970-71—continued**

<b>EMPLOYMENT(f)</b> ( <b>'000 man-weeks worked</b> )					
	1967(b)(c)	1968(c)	1968-69	1969-70	1970-71
<b>PRIVATE EXPLORATION</b>					
New South Wales . . . . .	22.5	20.9	26.1	30.7	40.7
Victoria . . . . .	5.6	7.0	6.3	5.7	5.1
Queensland . . . . .	27.2	33.3	36.5	48.4	60.7
South Australia . . . . .	3.6	7.2	9.2	10.9	11.2
Western Australia . . . . .	37.6	52.8	67.5	103.3	135.5
Tasmania . . . . .	7.4	7.5	7.4	8.8	11.4
Northern Territory . . . . .	8.8	11.0	10.8	12.7	17.4
<i>Total</i> . . . . .	<i>112.6</i>	<i>139.6</i>	<i>163.9</i>	<i>220.5</i>	<i>282.1</i>
<b>GOVERNMENT EXPLORATION</b>					
Commonwealth(d) . . . . .	14.2	11.9	11.7	16.5	18.1
State Mines Departments . . . . .	15.9	13.7	17.0	20.9	21.1
<i>Total</i> . . . . .	<i>30.1</i>	<i>25.5</i>	<i>28.7</i>	<i>37.4</i>	<i>39.2</i>
<b>TOTAL</b>					
By working proprietors and working partners . . . . .	(g)	(g)	(g)	(g)	7.2
By professional persons(h) . . . . .	46.7	49.9	57.6	73.1	94.5
By non-professional persons(i) . . . . .	96.0	115.2	135.0	184.8	219.5
<i>Australia</i> . . . . .	<i>142.7</i>	<i>165.1</i>	<i>192.6</i>	<i>257.9</i>	<i>321.2</i>
<b>FOOTAGE DRILLED, SUNK OR DRIVEN</b> ( <b>'000 ft</b> )					
<b>PRIVATE EXPLORATION</b>					
New South Wales . . . . .	908	1,031	1,146	1,528	1,657
Victoria . . . . .	182	128	141	137	100
Queensland . . . . .	2,029	1,669	1,873	1,959	2,797
South Australia . . . . .	161	227	250	614	654
Western Australia . . . . .	907	1,768	2,493	6,344	6,661
Tasmania . . . . .	152	149	177	192	307
Northern Territory . . . . .	259	303	352	292	451
<i>Total</i> . . . . .	<i>4,598</i>	<i>5,273</i>	<i>6,432</i>	<i>11,066</i>	<i>12,627</i>
<b>GOVERNMENT EXPLORATION</b>					
Commonwealth(d) . . . . .	6	15	21	28	10
State Mines Departments . . . . .	290	282	314	283	274
<i>Total</i> . . . . .	<i>296</i>	<i>297</i>	<i>335</i>	<i>311</i>	<i>284</i>
<b>TOTAL FOOTAGE DRILLED, SUNK OR DRIVEN(j)</b>					
Drilled—core . . . . .	1,727	2,003	2,641	3,045	3,114
non-core . . . . .	3,138	3,445	3,916	8,101	9,224
Sunk or driven . . . . .	30	122	210	231	574
<i>Australia</i> . . . . .	<i>4,896</i>	<i>5,570</i>	<i>6,767</i>	<i>11,376</i>	<i>12,912</i>

(a) Expenditure whether charged as working expenses or capitalised. (b) Excludes 'Other private exploration', not collected prior to 1968; see text. (c) Year ended 31 December. (d) Bureau of Mineral Resources and Joint Coal Board. (e) Included in expenditure shown above. Comprises amounts paid to drilling contractors, geological consultants, technical advisers, etc., for exploration services. (f) Operator and staff only (includes time spent on report writing and similar off-site activities associated with exploration); excludes contractors and their employees. (g) Not collected separately prior to 1970-71. Included in professional and non-professional employment; see text page 929. (h) Geologists, geophysicists, engineers, etc., engaged on exploration work. (i) Drill operators, field hands, etc. (j) 'Sunk or driven' relates to shafts, winzes, etc., sunk and drives, adits, etc., driven.

## Petroleum exploration

### Source of statistics

These statistics were collected and compiled by the Bureau of Mineral Resources, Geology and Geophysics, Canberra. Statistical and other information relating to petroleum exploration is published by the Bureau of Mineral Resources in *The Petroleum Newsletter* (issued quarterly), *The Australian Mineral Industry—Annual Review* and *Expenditure on Petroleum Exploration and Development*, 1965 (B.M.R. Record No. 1966 (205)).

### Scope

Petroleum exploration consists of the search for, and/or appraisal of, deposits of crude oil and/or natural gas and natural gas liquids by geological, geophysical, geochemical, and other exploration methods, including drilling. Included in the expenditure are the costs of drilling exploratory oil and/or gas wells and the testing of such wells. Also included are the cost of access roads, site construction, permits, licences and similar fees, relevant office buildings and furniture, transportation equipment, storage facilities, plant and equipment, and review work, where these are undertaken primarily for purposes of exploration for deposits of petroleum. Details of developmental oil and/or gas wells are excluded.

### Operations

The following tables show particulars of expenditure, and wells and footage drilled in petroleum exploration in recent years.

#### EXPENDITURE ON PETROLEUM EXPLORATION BY PRIVATE ENTERPRISE AND BY GOVERNMENTS: AUSTRALIA, 1967 TO 1970 (\$'000)

	1967	1968	1969	1970
PRIVATE SOURCES(a)				
Utilised in—				
New South Wales . . . . .	1,284	1,126	2,473	2,597
Victoria . . . . .	15,892	19,538	18,415	11,538
Queensland . . . . .	5,875	5,178	7,058	5,474
South Australia . . . . .	6,257	2,979	3,669	6,431
Western Australia . . . . .	11,788	21,532	26,194	29,557
Tasmania . . . . .	2,424	999	1,837	4,708
Northern Territory . . . . .	6,978	6,222	7,064	13,753
<i>Australia</i> . . . . .	<i>50,497</i>	<i>57,573</i>	<i>66,711</i>	<i>74,059</i>
GOVERNMENT SOURCES				
Payments under <i>Petroleum Search Subsidy Act</i> 1959–1969—				
Utilised in—				
New South Wales . . . . .	516	474	548	406
Victoria . . . . .	727	1,940	441	732
Queensland . . . . .	1,767	1,419	1,524	1,623
South Australia . . . . .	1,058	1,407	609	923
Western Australia . . . . .	3,441	4,027	6,286	4,604
Tasmania . . . . .	469	497	903	395
Northern Territory . . . . .	1,657	1,448	2,561	1,061
<i>Total subsidy payments, Australia</i> . . . . .	<i>9,635</i>	<i>11,213</i>	<i>12,871</i>	<i>9,744</i>
Utilised for—				
Geophysical . . . . .	4,512	3,590	3,557	2,924
Drilling . . . . .	5,123	7,622	9,315	6,820
Other Government sources—				
Commonwealth(a) . . . . .	4,508	4,756	4,238	3,841
State Mines Departments . . . . .	466	783	832	456
<i>Total other sources, Australia</i> . . . . .	<i>4,974</i>	<i>5,540</i>	<i>5,070</i>	<i>4,296</i>
<i>Total Government sources, Australia</i> . . . . .	<i>14,609</i>	<i>16,752</i>	<i>17,941</i>	<i>14,040</i>
TOTAL FUNDS, PRIVATE AND GOVERNMENT				
<i>Australia</i> . . . . .	<i>65,106</i>	<i>74,325</i>	<i>84,652</i>	<i>88,099</i>

(a) Excludes payments under the *Petroleum Search Subsidy Act* 1959–1969.

**SUMMARY OF EXPLORATION WELLS AND FOOTAGE DRILLED IN PETROLEUM  
EXPLORATION: STATES AND TERRITORIES, 1970**

		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Total</i>
<b>Wells—</b>									
Drilled (i.e. those which reached final depth)—									
As oil producers . . . . .	No.	1	17	7	1	1	1	1	2
As gas producers . . . . .	No.	11	17	43	16	14	4	3	15
Plugged and abandoned . . . . .	No.								108
<b>Total . . . . .</b>	<b>No.</b>	<b>12</b>	<b>17</b>	<b>50</b>	<b>23</b>	<b>15</b>	<b>4</b>	<b>4</b>	<b>125</b>
Average final depth of wells drilled . . . . .	ft	2,588	5,086	4,807	6,300	6,654	8,787	5,352	5,361
Drilling still in progress at 31 December (uncompleted holes) . . . . .	No.	1	1	4	1	4	2	8	
Wells drilled or drilling over 10,000 feet . . . . .	No.	2	4	5	5	2	1	19	
<b>Footage drilled—</b>									
Completed wells . . . . .	ft	31,061	86,462	230,515	134,538	91,037	35,149	22,980	631,732
Uncompleted holes . . . . .	ft	9,841	10,352	28,737	3,780	52,710			
<b>Total . . . . .</b>	<b>ft</b>	<b>31,061</b>	<b>86,462</b>	<b>240,346</b>	<b>144,890</b>	<b>119,774</b>	<b>35,149</b>	<b>26,760</b>	<b>684,442</b>

**SUMMARY OF EXPLORATION WELLS AND FOOTAGE DRILLED IN PETROLEUM  
EXPLORATION: AUSTRALIA, 1967 TO 1970**

		1967	1968	1969	1970
<b>Wells—</b>					
Drilled (i.e. those which reached final depth)—					
As oil producers . . . . .	No.	4	1	1	2
As gas producers . . . . .	No.	7	4	6	15
Plugged and abandoned . . . . .	No.	72	78	101	108
<b>Total . . . . .</b>	<b>No.</b>	<b>83</b>	<b>83</b>	<b>107</b>	<b>125</b>
Average final depth of wells drilled . . . . .	ft	5,575	6,135	6,170	5,361
Drilling still in progress at 31 December (uncompleted holes) . . . . .	No.	8	8	11	8
Wells drilled or drilling over 10,000 ft . . . . .	No.	11	13	24	19
<b>Footage drilled—</b>					
Completed wells . . . . .	ft	373,336	453,318	604,683	631,732
Uncompleted holes . . . . .	ft	48,332	57,729	70,922	52,710
<b>Total . . . . .</b>	<b>ft</b>	<b>421,668</b>	<b>513,047</b>	<b>675,605</b>	<b>684,442</b>

### Mineral processing and treatment

The extraction of minerals from ore deposits, as in mining and quarrying, is only part of the wider field of mineral technology. It is only in rare instances that minerals can be used directly in the form in which they are produced by mines, and, much more commonly, minerals must undergo considerable processing and treatment before their full utility and value can be realised. Examples of this processing and treatment are the smelting and refining of metals, the production of coke from coal, the refining of oil, and the treatment of non-metallic minerals as in the production of superphosphate and other chemicals and building materials like bricks and cement. The sectors of the economy which carry out this work are classified for statistical purposes to the manufacturing industry, and particulars relating to those activities which principally involve mineral processing and treatment—i.e. the treatment of non-metalliferous mine and quarry products, the manufacture of mineral oils and chemical fertilisers, the smelting, converting, refining and rolling of iron and steel, the extracting and refining of other metals, and the manufacture of alloys are given in Chapter 21, Manufacturing Industry.

#### Principal products

The following table shows particulars of the production of certain important manufactured products of mineral origin during the years 1965–66 to 1969–70.



**PRODUCTION OF PRINCIPAL MANUFACTURED PRODUCTS  
OF MINERAL ORIGIN: AUSTRALIA, 1965-66 TO 1969-70**

Commodity	1965-66	1966-67	1967-68	1968-69p	1969-70p
<b>METALS(a)</b>					
<b>Non-ferrous—</b>					
Alumina . . . . . tons	227,077	474,716	1,136,208	1,591,802	1,995,474
Refined aluminium . . . . . "	87,222	92,826	87,733	109,998	165,709
Blister copper(b) . . . . . "	98,529	77,788	75,344	109,582	108,852
Refined copper . . . . . "	91,588	74,313	72,166	94,731	103,680
Lead bullion (for export)(b) . . . . . "	81,709	84,690	101,477	132,218	169,007
Refined lead . . . . . "	188,197	192,384	186,908	175,664	185,366
Refined zinc . . . . . "	196,534	197,030	187,325	228,198	257,674
Refined tin . . . . . "	3,524	3,224	3,955	3,960	4,637
<b>Ferrous—</b>					
Pig iron . . . . . '000 tons	4,380	4,893	5,209	5,722	5,888
Steel ingots . . . . . "	5,561	6,114	6,287	6,599	6,766
<b>Precious—</b>					
Refined gold(c) . . . . . '000 f oz	774	726	655	622	527
Refined silver . . . . . "	8,766	9,825	9,693	9,428	10,581
<b>FUELS</b>					
<b>Coal products—</b>					
Metallurgical coke . . . . . '000 tons	3,179	3,365	3,678	3,647	3,994
Brown coal briquettes . . . . . "	1,883	1,820	1,745	1,471	1,539
<b>Petroleum products—</b>					
Motor spirit . . . . . mil. gal	1,524	1,763	1,897	2,032	2,110
Furnace fuel . . . . . '000 tons	5,340	5,759	6,206	6,113	5,987
Automotive distillate . . . . . "	1,829	2,167	2,344	2,579	2,852
Industrial diesel fuel . . . . . "	859	901	984	1,038	1,080
<b>BUILDING MATERIALS</b>					
Clay bricks . . . . . millions	1,360	1,361	1,440	1,612	1,697
Portland cement . . . . . '000 tons	3,688	3,661	3,805	4,075	4,439
Plaster of paris . . . . . "	266	261	278	282	303
Plaster sheets . . . . . '000 sq yd	29,917	30,601	32,809	35,310	39,594
<b>CHEMICALS</b>					
Sulphuric acid . . . . . '000 tons	1,781	1,991	1,892	1,853	1,748
Caustic soda . . . . . tons	75,229	91,009	98,190	105,478	111,107
Superphosphate . . . . . '000 tons	4,265	4,430	3,935	3,879	3,598

(a) Excludes secondary metal with the exception of pig iron and steel ingots. (b) metallic content. (c) Newly-won gold of Australian origin.

## Overseas trade

### Exports and imports

Data of imports and exports of minerals and mineral products have been extracted from the official trade statistics compiled in the Commonwealth Bureau of Census and Statistics. Particulars of the quantities and values (\$f.o.b. port of shipment) of the principal minerals and mineral products exported from and imported into Australia during the years 1968-69 to 1970-71 are shown in the following table.

**EXPORTS AND IMPORTS OF PRINCIPAL MINERALS AND MINERAL PRODUCTS  
AUSTRALIA, 1968-69 TO 1970-71**

Commodity(a)	Quantity			Value (\$'000 f.o.b.)			
	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71	
EXPORTS(b)							
Alumina	'000 tons	n.a.	n.a.	1,778	75,806	80,987	95,125
Aluminium and aluminium base alloys—							
Unworked shapes	tons	8,226	49,724	78,403	4,304	22,972	35,962
Rolled, drawn and extruded shapes	tons	2,683	2,005	3,576	1,812	1,295	3,079
Coal	'000 tons	13,815	17,345	18,697	117,103	164,498	193,721
Copper—							
Ore and concentrate	tons	41,073	64,082	138,003	9,769	14,620	32,031
Blister	"	7,551	7,903	6,862	9,938	13,256	8,992
Ingots, pigs (refined)	"	26,649	38,014	35,446	27,337	54,733	35,521
Rolled, drawn and extruded shapes	"	10,101	10,350	12,682	11,645	16,103	16,722
Gold, refined	fine oz	447,929	473,411	76,646	15,894	16,377	2,451
Ilmenite concentrate	tons	495,231	586,798	630,935	5,229	5,888	6,471
Iron and steel—							
Iron ore	'000 tons	20,072	33,244	47,558	179,515	277,810	375,388
Pig iron	tons	346,183	306,156	383,567	13,105	14,742	21,587
Ingots, blooms and slabs	"	424,838	444,077	115,359	23,858	30,945	9,596
Tinplate	"	44,029	56,487	45,981	5,410	8,086	8,037
Scrap	"	481,982	520,967	460,926	11,751	17,039	17,412
Lead—							
Ore and concentrate	"	113,343	119,468	81,784	22,020	23,320	16,290
Lead-silver bullion	"	126,348	167,074	176,971	39,262	60,461	56,455
Pig	"	115,415	152,273	121,210	24,994	43,285	29,023
Manganese ore	"	629,531	630,470	692,541	11,837	11,440	12,961
Opals	"	..	..	..	11,883	12,272	11,365
Petroleum oils—							
Gasolines and solvents	'000 gal	63,539	56,389	57,262	6,890	5,979	7,664
Kerosenes	"	23,717	40,372	64,522	2,889	4,327	7,191
Automotive distillate, industrial and marine diesel fuels and heavy distillate, n.e.i.	"	48,291	67,066	103,576	4,225	5,408	8,550
Residual oils	"	70,289	103,721	68,641	3,984	3,797	3,100
Lubricating oil	"	24,804	23,112	35,063	7,497	7,136	10,715
Rutile concentrate	tons	286,080	340,964	374,906	22,844	30,209	36,399
Silver—refined ingot bar	'000 fine oz	11,667	7,942	7,959	21,695	13,350	12,237
Tin ores and concentrates	tons	6,387	7,031	6,243	8,959	10,453	7,636
Tungsten concentrates—							
Scheelite concentrate	"	1,771	1,409	1,205	4,407	4,225	3,607
Wolfram concentrate	"	679	949	986	1,929	3,494	4,100
Zinc—							
Ore and concentrate	"	332,619	430,216	381,217	21,820	30,503	25,739
Refinery type shapes	"	115,562	152,273	134,506	27,291	38,736	35,671
Zircon concentrate	"	295,989	345,495	357,424	11,952	13,489	13,200
IMPORTS							
Alumina	tons	2,972	3,202	17,556	504	686	1,701
Aluminium, refined ingots	"	11,160	1,056	323	5,437	716	295
Asbestos	short tons	59,962	65,447	79,015	7,628	8,572	10,705
Diamonds—							
Gemstone	m carat	35,526	33,826	49,847	5,246	5,447	6,573
Industrial	"	461,321	963,226	744,802	2,299	3,626	3,106
Gold—							
Unrefined bullion(c)	fine oz	114,276	129,287	103,254	4,075	4,146	3,146
Refined	"	4,109	62,230	8,167	143	2,389	232
Ferro-alloys	tons	22,188	30,589	37,243	5,316	12,748	11,660
Nickel—pig. ingot anodes	"	1,784	1,466	2,104	3,554	5,372	8,781
Petroleum oils—							
Crude	m gal	4,297	4,179	2,297	174,792	163,901	89,872
Enriched crude and other refinery feedstock	"	874	918	714	39,453	38,883	31,453
Gasolines and solvents	'000 gal	147,578	227,011	245,965	13,457	22,066	22,723
Kerosene	"	30,542	37,171	44,490	3,309	3,891	4,482
Automotive distillate, industrial and marine diesel fuels and heavy distillate, n.e.i.	"	54,421	75,600	126,561	4,336	5,577	8,640
Residual oils	"	137,431	265,711	360,413	5,668	10,208	16,607
Lubricating oil	"	10,821	8,689	12,520	3,407	2,973	3,979
Phosphate rock	'000 tons	3,177	2,746	2,074	31,606	27,875	22,174
Potassium fertilisers	tons	134,933	127,347	150,847	3,457	3,432	4,793
Sulphur	"	394,987	427,300	269,024	15,434	10,786	4,906
Tin, refined	"	143	103	117	415	347	376
Titanium oxide (pigments)	"	1,192	1,110	750	480	443	389

(a) In addition to the commodities listed, significant quantities of bauxite and nickel ores and concentrates are exported but details are not available for publication. (b) Australian produce. (c) Gold content.

Considerable quantities of metallic ores, concentrates, slags, and residues are exported from Australia for refining overseas. The following table shows the quantities of selected items exported during 1969-70 and 1970-71 and their principal metallic content as estimated by assay.

PRINCIPAL METALLIC CONTENTS OF SELECTED ORES AND CONCENTRATES  
ETC., EXPORTED FROM AUSTRALIA, 1969-70 AND 1970-71

Ores and concentrates, etc.	Metallic contents—estimated from assay								
	Copper	Lead	Zinc	Tin	Iron	Manganese	Tungstic oxide(a)	Gold	Silver
1969-70									
	tons	tons	tons	tons	'000 tons	tons	units	fine oz	'000 fine oz
Copper concentrate . . . . .	12,578	..	..	156	..	..	..	40,929	64
Blister copper . . . . .	7,863	..	..	..	..	..	..	60,235	41
Copper matte, slags, etc.(b) . .	2,889	6,802	..	1	..	..	..	22	287
Lead concentrate . . . . .	1,725	76,759	9,191	..	..	..	..	25,774	2,941
Lead-silver bullion . . . . .	1	164,996	..	..	..	..	..	..	12,182
Lead slags and residues . . . .	293	1,895	95	57	..	..	..	..	26
Zinc concentrate . . . . .	..	3,475	218,470	..	..	..	..	..	365
Zinc slags and residues . . . .	10	3	3,445	..	..	..	..	..	..
Tin concentrate . . . . .	5	4	..	3,657	..	..	..	..	..
Iron ore—	..	..	..	..	..	..	..	..	..
Pellets . . . . .	..	..	..	..	3,303	..	..	..	..
Fines . . . . .	..	..	..	..	4,749	..	..	..	..
Lump . . . . .	..	..	..	..	13,297	..	..	..	..
Manganese ore . . . . .	..	..	..	..	..	293,891	..	..	..
Scheelite concentrate . . . . .	..	..	..	..	..	..	99,420	..	..
Wolfram concentrate . . . . .	..	..	..	..	..	..	65,518	..	..
Total metallic content . . . . .	25,364	253,934	231,201	3,871	21,349	293,891	164,938	126,960	15,907
1970-71									
Copper concentrate . . . . .	32,919	..	..	107	..	..	..	27,025	223
Blister copper . . . . .	6,831	..	..	..	..	..	..	54,467	40
Copper matte, slags, etc.(b) . .	2,920	4,213	27	..	..	..	..	23	212
Lead concentrate . . . . .	1,282	54,316	5,442	..	..	..	..	137,301	1,920
Lead-silver bullion . . . . .	184	175,796	..	..	..	..	..	4	9,633
Lead slags and residues . . . .	188	2,015	37	17	..	..	..	..	11
Zinc concentrate . . . . .	..	2,235	197,964	..	..	..	..	..	78
Zinc slags and residues . . . .	..	..	4,068	..	..	..	..	..	..
Tin concentrate . . . . .	4	5	..	2,690	..	..	..	..	..
Iron ore—	..	..	..	..	..	..	..	..	..
Pellets . . . . .	..	..	..	..	3,634	..	..	..	..
Fines . . . . .	..	..	..	..	8,503	..	..	..	..
Lump . . . . .	..	..	..	..	18,567	..	..	..	..
Manganese ore . . . . .	..	..	..	..	..	318,850	..	..	..
Scheelite concentrate . . . . .	..	..	..	..	..	..	84,585	..	..
Wolfram concentrate . . . . .	..	..	..	2	..	..	66,766	..	..
Total metallic content . . . . .	44,328	238,589	207,538	2,816	30,704	318,850	151,351	218,820	12,117

(a) 1 unit = 22.4 lb. (b) Includes copper matte, copper slags and residues and copper-lead dross and speiss.

## Prices

The following table shows average prices of some principal refined metals and ores and concentrates on Australian and certain major overseas markets. Prices of minerals such as iron ore, coal and bauxite are not shown, as these minerals are commonly sold on a contract basis rather than on an open market basis.

**AVERAGE DAILY PRICES OF SELECTED METALS AND METALLIC ORES AND CONCENTRATES: AUSTRALIAN AND OVERSEAS MARKETS, 1966-67 TO 1970-71**

(Source: Bureau of Mineral Resources, Geology and Geophysics)

Detail	Units	1966-67	1967-68	1968-69	1969-70	1970-71
METALS(a)						
Aluminium—						
Australia . . . . .	\$A-ton	520.00	520.90	538.00	564.90	578.00
United States . . . . .	USc-lb	24.7	25.1	26.4	27.9	29.0
Copper—						
Australia . . . . .	\$A-ton	1,048.30	1,132.10	1,126.50	1,500.10	1,087.40
London Metal Exchange	£Stg-tonne	(b)431.7	(b)511.5	(b)516.7	671.8	477.7
Lead—						
Australia . . . . .	\$A-ton	228.80	210.00	234.30	283.50	262.40
London Metal Exchange	£Stg-tonne	(b)85.1	(b)92.0	(b)109.3	132.2	114.7
United States . . . . .	USc-lb	14.27	13.84	13.46	16.10	14.60
Zinc—						
Australia . . . . .	\$A-ton	265.70	258.00	266.10	291.20	295.70
London Metal Exchange	£Stg-tonne	(b)100.2	(b)105.3	(b)114.0	123.9	121.3
'Producers' . . . . .	\$Stg-ton	101.9	108.0	115.8	127.3	128.8
United States . . . . .	USc-lb	14.36	13.50	13.84	15.30	15.25
Tin—						
Australia . . . . .	\$A-ton	3,160.00	3,007.80	3,063.20	3,463.80	3,344.90
London Metal Exchange	£Stg-tonne	(b)1,220.0	(b)1,274.9	(b)1,363.6	1,524.6	1,476.7
Straits . . . . .	\$Mal-picul	608.3	577.8	585.6	669.7	643.1
Nickel—						
United Kingdom . . . . .	£Stg-tonne	682.0	837.0	(b)944.0	1,123.7	1,231.1
Gold—						
Premium markets—						
Australia . . . . .	\$A-f oz	(c)	36.42	36.83	33.49	33.76
Overseas . . . . .	\$A-f oz	31.47	32.54	36.17	32.05	31.98
United Kingdom . . . . .	£Stg-f oz	12.6	(d)	41.28	37.40	37.87
Silver—						
United Kingdom . . . . .	Stg new pence-f oz	(e)115.3	(e)195.2	(e)198.6	(e)179.1	70.3

**ORES AND CONCENTRATES**

Tin—						
Australia . . . . .	\$A-ltu	27.21	25.81	25.98	30.90	28.66
Wolfram—						
United Kingdom . . . . .	£Stg-ltu	15.49-16.26	14.75-21.13	18.00-22.50	21.00-38.00	22.80-36.75
Rutile—						
Australia . . . . .	\$A-ton	92-96	88-96	88-124	124-150	145-150
United Kingdom . . . . .	£Stg-tonne	(b)43.79-45.04	(b)43.00-50.00	(b)48.50-66.00	(b)66.00-79.00	74.78-79.72
Ilmenite—						
Australia . . . . .	\$A-ton	8.25-10.00	9.00-10.00	9.00-10.00	9.00-11.00	11.00
United Kingdom . . . . .	£Stg-tonne	(b)7.00-7.25	(b)7.00-9.50	(b)7.50-9.50	(b)7.50-9.50	(b)7.38-11.32
Zircon—						
Australia . . . . .	\$A-ton	47.42-51.42	46-50	42-50	35-47	35-39
United Kingdom . . . . .	£Stg-tonne	(b)25.50-26.92	(b)25.00-30.00	(b)26.25-30.00	(b)25.25-27.75	24.85-28.05

(a) Where a daily price does not actually exist for a commodity, daily prices have been imputed from price data which are available. (b) £Stg per ton. (c) There was no Australian premium market prior to May 1968. (d) Not available owing to break in continuity of series; since April 1968 London Gold Market transactions have been in non-monetary gold only. (e) d Stg per f oz.

Details of monthly prices, and price specifications, relating to each commodity in this table, are contained in each issue of the monthly mimeographed bulletin *Minerals and Mineral Products* (10.19).



## REVIEW OF RECENT DEVELOPMENTS IN THE AUSTRALIAN MINERAL INDUSTRY

Prior to Year Book No. 52 it was customary to include a series of detailed reviews of the principal commodities produced by the Australian mineral industry and recent developments concerning these commodities. However, with the increasing diversification and development of the industry, it has become impractical to continue these reviews in the Year Book and the reader who wishes to obtain information of this kind is referred to *The Australian Mineral Industry—Annual Review* published by the Bureau of Mineral Resources, Geology and Geophysics. That publication contains comprehensive reviews of mineral commodities of importance to the Australian economy, as well as a general review of the industry's performance during each year. Major developments in the industry, particularly during the last year, are reviewed briefly in subsequent parts of this section.

Expansion of the Australian mineral industry was maintained during 1971, with the preliminary value of mineral production increasing approximately 11 per cent from \$1,447 million in 1970 to approximately \$1,600 million in 1971. The major reasons for this increase in the value of mineral production were a substantial increase in the production of crude oil, mainly from the Bass Strait fields in Victoria, the continued expansion of iron ore mining, and the increased production of bauxite, copper, manganese and nickel. The total value of mineral exports continued to increase, mainly because of the increase in shipments of iron ore, black coal, alumina, bauxite and nickel.

### Bauxite

The history of the aluminium industry and recent significant developments in the industry were reviewed in previous issues of the Year Book (No. 51, page 1168 and No. 52, page 1048). The year 1971 was a period of continued growth in the industry both in mining and processing as detailed below.

Bauxite production from deposits at Weipa, Queensland, increased to a rate of 7 million tons in 1971 following completion of a further stage in the development of the mine and associated township, and of ore treatment and loading facilities. Production capacity will be increased to 10.5 million tons annually by the end of 1972. Approximately 3 million tons from Weipa were used by the Gladstone, Queensland, alumina refinery in 1971, and the requirements of the small refinery at Bell Bay, Tasmania, are estimated as 120,000 tons yearly; the remaining production is available for export.

Bauxite deposits at Gove, Northern Territory, covering reserves of the order of 250 million tons of ore, are being developed by a consortium of seven Australian and one overseas companies. The consortium plans to construct an alumina plant at Gove by mid-1972 with an initial capacity of 500,000 metric tons per annum, increasing to 1,000,000 metric tons annually by mid-1973.

An agreement was signed in Perth in December 1968 with the Western Australian Government for the development of a bauxite/alumina project in the Admiralty Gulf area. A similar agreement was signed in November 1970 for the establishment of a second bauxite/alumina project based on the Darling Range bauxites, and involving an alumina refinery and port facilities at Bunbury.

### Alumina

Expansion of the alumina refinery at Gladstone, Queensland, was completed by the end of 1968, increasing the capacity of the refinery to 900,000 tons per annum; the plant has since been expanded to 1,275,000 tons yearly and will be increased further to 2,000,000 tons per annum by early 1973. The alumina refinery at Kwinana, Western Australia, was expanded from 817,000 tons to 1,024,000 tons annually by July 1970 and to 1,250,000 tons by the end of 1970. Bauxite supplies for the Kwinana refinery are obtained from deposits 30 miles away at Jarrahdale, Western Australia, the reserves of which are assessed as at least 500 million tons. A new alumina plant was also commissioned at Pinjarra, Western Australia, in April 1972, with an initial production capacity of 210,000 tons yearly. Comalco Ltd plans to set up an alumina plant, with a capacity of 1,600,000 tons annually, at Weipa in 1976.

### Aluminium

Operating capacity of the smelter at Kurri Kurri, New South Wales, was steadily increased during 1971, and reached a capacity of 44,600 tons annually. The smelter will be expanded to 90,000 tons as and when the market demands. An aluminium powder and paste plant, capable of supplying the whole of Australia's needs, was commissioned in 1968 at Bell Bay, Tasmania. The capacity of the reduction plant at Bell Bay was increased to 94,000 tons per annum in January 1971. Additional capacity at Port Henry, Victoria, was commissioned in 1969 bringing the smelter's total operating capacity to 90,000 tons yearly. A letter of intent has been received by the Western Australian Government regarding the possible establishment of an aluminium smelter at Kwinana within the next decade.

### Copper

Copper production at Mount Isa will be increased to 150,000 tons yearly by 1974. The expansion programme provides for a new hoisting shaft, extensions to the existing copper smelter and a new concentrator, as well as enlargement of ancillary facilities.

A new copper-gold ore body is being developed near Tennant Creek, Northern Territory. The first stage of development, which will cost \$21 million, will have an installed mining capacity of 500,000 tons of ore per annum and is scheduled for completion by October 1972.

Since the beginning of 1967 the Australian producers' price has been adjusted regularly to reflect movements in the London Metal Exchange daily settlement price. In the early part of 1971, after reaching 52 cents per pound (\$1,164.8 per long ton) in May, the Australian price eased to 41 cents (\$918.4 per long ton) by late November at which it continued until the end of the year.

### Iron

The major development of recent years has been the establishment in Australia of a large scale iron ore export industry based principally on steelmaking requirements in Japan. Exports of iron ore and iron ore pellets in 1971 to Japan and elsewhere were 52 million tons valued at \$406 million.

Reduced iron ore demand, which resulted from a world-wide steel industry recession during 1971, and particularly because of the cutback in Japanese steel output, has led to the deferment of expansion programmes at Paraburdoo and Mount Whaleback, Western Australia.

The Mount Newman Consortium which had planned to achieve a shipment capacity of 25 million tons per year by March 1972 and 30 million tons per year by September 1972 from its Mount Whaleback operation deferred part of the construction which would result in capacity reaching an upper level of 30 million tons. This part of the expansion programme is to be deferred until sales commitments warrant its completion.

Hammersley Iron Pty Ltd will not commence commercial production at Paraburdoo as early as previously anticipated and its Mount Tom Price deposits are expected to be able to supply all ore required for anticipated demand during 1972. Production capacity at Mount Tom Price has been expanded to 22.5 million tons per year and port capacity at Dampier has been expanded. Production capacity at Paraburdoo is planned to be 15 million tons per year.

Annual production from the Mount Goldsworthy, Western Australia, iron ore project is being increased to 8 million tons by 1973. Production capacity at the existing Mount Goldsworthy mine has been increased and deposits at Shay Gap and Sunrise Hill nearby will be developed.

Construction of facilities for the mining of deposits of limonite at Robe River, Western Australia, commenced in 1970. Exports from the Robe River project are expected to commence in late 1972 and build up to a minimum annual rate of 6.1 million tons of prepared sinter fines and 4.2 million tons of iron ore pellets by 1975.

### Lead and zinc

Following record mine production of lead and zinc in 1969, resulting from completion of major mine expansion programmes at Mount Isa in Queensland and Broken Hill in New South Wales, output of lead increased marginally in 1970 while output of zinc declined. However, in 1971 output of both metals was cut back well below 1969 levels; mine production of lead in 1971 was 392,400 tons and of zinc 441,100 tons. Production of lead bullion at Cockle Creek in New South Wales and Mount Isa, supplemented by small production from Port Pirie, South Australia, was 157,900 tons in 1971, about 6 per cent lower than in 1970, and production of primary refined lead at Port Pirie was cut back from 177,200 tons in 1970 to 160,700 tons in 1971 in response to weakening demand and oversupply on world markets. Total production of refined zinc from Risdon in Tasmania, Port Pirie and Cockle Creek was also cut back in 1971 to 254,600 tons which was about one per cent lower than the record level of 1970.

Strengthening world markets for lead and zinc should allow producers to return to higher levels of production in 1972. Completion of a programme of expansion at the Rosebery mine in Tasmania and additions to the electrolytic zinc refinery at Risdon will make substantial contributions to zinc production but closure of the South Mine at Broken Hill and a continuation of reduced output of lead bullion at Mount Isa will restrict the growth of lead production. A decision to reduce production of lead bullion at Mount Isa was announced early in 1971 and, at the same time, commencement of one of the two major shafts at the new Hilton Mine in Queensland was deferred until 1973. The Hilton Mine is expected to become a major producer of lead and zinc in the late 1970s.

### Black coal

There has been a significant revival in the Australian black coal industry in recent years as a result of increased exports and increased consumption of black coal in iron and steel production and electricity generation. These increases have more than balanced reduced consumption in some applications due to competition from fuel oil.

The expansion of the export trade has been of major significance. In 1955 exports were about 200,000 tons valued at about \$1.7 million; in 1971 exports were 19.8 million tons valued at \$212.3 million. These increased exports have been largely to Japan for use in the iron and steel industry. As a result of this increased demand, new mines have been opened and others are under development in Queensland and New South Wales, and many established mines are being expanded. Exploration for coal has been stimulated and further rich deposits of coking coal have been located, particularly in Queensland.

### **Petroleum**

At the end of 1971, there were six Australian oil fields in production, namely, Moonie and Alton, Queensland; Barrow Island, Western Australia; and Barracouta, Kingfish, and Halibut in the Gippsland Shelf area offshore from Victoria. In addition, a small amount of oil is being produced from the Bennett field and several other wells in the Roma area in Queensland. In 1969 commercial and domestic use of natural gas began in Brisbane, Melbourne and Adelaide and in late 1971, in Perth. The production of crude oil in 1971 from the Australian oil fields was 112,913,893 barrels representing some 60 per cent of the country's requirement of refinery feedstock. The cumulative production of crude oil to 31 December 1971 amounted to \$224.4 million barrels.

In 1971, additional discoveries were made in the Cooper Basin in South Australia at Coonatie, Big Lake and Fly Lake and at Walyering, Rankin, North Rankin, and Scott Reef in Western Australia. The provisional figure for footage drilled in petroleum exploration and development in Australia in 1971 was 760,814 feet which is some 476,521 feet less than the footage drilled in the previous year. About 577,770 feet of the 1971 total was attributed to exploration drilling of which 179,041 feet were drilled offshore. A total of 106 wells were completed in 1971, of which 84 were exploration wells, 15 of them offshore. In comparison with the previous year there was a fall of 16 in the number of exploration wells and a decline of 87 development wells in 1971. The decline which was mostly in development drilling was due to the completion of the drilling in the Halibut, Kingfish and Barrow Island fields with the end of the initial developmental programmes in those fields. There was a drop of 11 in the number of offshore exploratory wells which also made a significant contribution to the fall in drilling activity.

### **Nickel**

Output from Australia's first major nickel mining operation at Kambalda in Western Australia has grown to more than 30,000 tons of nickel per annum since mining commenced in 1967. Mines at Nepean and Scotia also commenced production in early 1969 and a fourth mine is being developed at Carr Boyd Rocks; all of these mines are located in the Kalgoorlie area. At the end of 1971 the refinery at Kwinana, Western Australia, was producing more than 15,000 tons of nickel metal per annum from concentrates; the remaining concentrates will continue to be exported until further smelting and refining facilities are constructed.

Plans have been drawn for the development of the lateritic nickel deposit at Greenvale in Northern Queensland. Following the successful completion of pilot plant tests, construction of a railway and an ammonia leach treatment plant at Townsville, northern Queensland, were commenced in early 1972. Production of 23,000 tons of nickel oxide sinter per annum could commence during 1974.

### **Phosphate**

Major deposits of phosphate rock were discovered during 1966 near Duchess and Lady Annie in north-west Queensland. The deposits are large by world standards, and feasibility studies are still in progress. Survey work has finished on a possible railway route between Lady Annie and the Gulf of Carpentaria, 800 miles away. Transport and port facilities will be key factors in determining whether the project is to be undertaken.







## CHAPTER 27

# ELECTRIC POWER GENERATION AND DISTRIBUTION

This chapter is divided into three major parts: the Introduction, which deals briefly with the resources, generation and distribution, and future development of electric power in Australia; the Snowy Mountains Hydro-electric Scheme; and the origins, development, present situation and new projects of electrical systems in each Australian State and internal Territory.

The information contained in the chapter relates to situations existing and projects contemplated in March 1972, and may be considerably affected by changes in policy or plans, or by developments in the projects themselves. Greater descriptive and historical detail about the various systems is contained in earlier issues of the Year Book. Statistics on the electricity industry are included in tables in Chapter 21, Manufacturing Industry.

## INTRODUCTION

### Distribution of population and location of electric power resources in Australia

The two principal centres of population and industry in Australia, the metropolitan areas of Sydney and Melbourne, make the greatest demands for electric power, and their growth has been associated with the development of large deposits of coal located relatively close to the source of demand. This, together with the fact that the major water resources are also located in the south-eastern portion of Australia, materially influences the distribution of industrial population and the location of major electric power stations. By far the most important source of energy used in the production of electric power in Australia is coal. At 30 June 1971 thermal power equipment represented 70.9 per cent, hydro plant 26.8 per cent, and internal combustion and gas turbine equipment 2.3 per cent of the total installed generating capacity.

Most of Australia is poorly supplied with water, only about 13 per cent receiving an annual rainfall of 30 inches or over, and these areas are confined largely to Tasmania and to the narrow coastal strip along the east coast of the mainland. The only region on the mainland of Australia high enough to receive reliable winter snowfall, and from which, therefore, reasonably constant water supplies throughout the year can be expected, is the mountain chain which stretches from the high plateaux of south-eastern New South Wales to the north-eastern highlands of Victoria. The hydro-electric potential of this area is considerable, and plans have been formulated to develop more than 4,000,000 kW by 1975. The two major construction projects in this area are the Snowy Mountains and Kiewa schemes. Other hydro-electric potential does exist on the mainland on the rivers of the coastal areas of New South Wales and Queensland, but the amount available is smaller than the potential of the Alpine region. In Tasmania, hydro-electric resources have been estimated at about 50 per cent of the total Australian hydro-electric potential. On the mainland the chief source of energy is coal; in Tasmania it is water.

### Electric power generation and distribution

At the beginning of this century Australia's electrical undertakings were carried on mainly by private enterprise, but with some measure of government control designed to provide standards of safety and to define the scope and obligations of the private organisations. A trend towards public ownership commenced during the 1914–18 War and became more pronounced after the 1939–45 War. By 1961 all major generating stations supplying the public were, in varying degrees, under the control of statutory organisations constituted with the object of unifying and co-ordinating the generation and distribution of electricity supplies. There are still a large number of small private and municipal enterprises generating power for supply to country towns, although central authorities are extending supply to these places wherever practicable. In many areas it has been, and remains, the practice for central authorities to sell power in bulk to local distributing organisations which undertake reticulation.

In addition to the private, local government and statutory organisations which generate and or distribute electricity for sale, numerous firms generate power for use in their own establishments, particularly those engaged in mining remote from the main centres of population. This chapter, however, is concerned mainly with the activities of central electric stations, as the power regularly

produced for such internal consumption is, in any case, a relatively small proportion of the total power produced. The measures taken by authorities to satisfy the demand created by the post-war growth in population and building and by developments in industry and commerce are described in the following pages.

## SNOWY MOUNTAINS HYDRO-ELECTRIC SCHEME\*

### **Snowy Mountains Hydro-electric Power Act 1949-1958**

In July 1949 the Commonwealth Government established the Snowy Mountains Hydro-electric Authority, and empowered it to generate electricity by means of hydro-electric works in the Snowy Mountains Area; supply electricity to the Commonwealth (i) for defence purposes, (ii) for consumption in the Australian Capital Territory; and supply to a State, or to a State Authority, electricity not required for defence purposes or for consumption in the Australian Capital Territory.

The Snowy Mountains Act is supported by a detailed agreement between the States of New South Wales and Victoria and the Commonwealth with regard to the construction and operation of the Scheme, the distribution of power and water, charges to be made for electricity, and other such matters. The Snowy Mountains Council, established under the terms of the Agreement and consisting of representatives of the Commonwealth, the Authority and the two States, directs and controls the operation and maintenance of the permanent works of the Authority and the allocation of loads to generating stations.

### **Snowy Mountains Hydro-electric Scheme**

The broad basis of the Snowy scheme is to transfer waters, which would otherwise flow to the sea unharnessed, from the Snowy River and its tributaries to the inland system, so that the water may be used for irrigation and to provide power. It involves two main diversions, the diversion of the Eucumbene, a tributary of the Snowy, to the Upper Tumut River, and the diversion of the main stream of the Snowy River at Island Bend and Jindabyne to the Swampy Plain River. These two diversions divide the scheme geographically into two sections, the Snowy-Tumut Development and the Snowy-Murray Development (*see* plate 53 opposite). For purposes of both power production and irrigation it is necessary to regulate run-off, and this is achieved by the use of Lake Eucumbene (formed by the construction of Eucumbene Dam) and other storages to control the waters of the Eucumbene, Murrumbidgee, Tooma, and Tumut Rivers for the Snowy-Tumut Development and of the Snowy and Geehi Rivers for the Snowy-Murray Development. A sectional diagram of the scheme appears on plate 54, page 944.

*Snowy-Tumut Development.* This development comprises works for the diversion and regulation of the waters of the Eucumbene, Upper Tooma, Upper Murrumbidgee, and Upper Tumut Rivers and their combined development through a series of power stations down the Tumut River. A major dam has been constructed on the Eucumbene River to create Lake Eucumbene, which has an ultimate usable storage of 3.5 million acre feet. The waters of the Upper Murrumbidgee River are diverted into Lake Eucumbene by a dam at Tantangara and a 10½-mile tunnel from Tantangara Reservoir. From Lake Eucumbene the water flows through a 14-mile tunnel to Tumut Pond Reservoir on the upper reaches of the Tumut River, where it joins the waters of the Tumut River itself and the waters of the Tooma River diverted to Tumut Pond Reservoir by a diversion dam and a 9-mile tunnel.

From Tumut Pond Reservoir water is conveyed by pressure tunnel to Tumut 1 underground Power Station (capacity 320,000 kW), returned to the Tumut River and then by another pressure tunnel to Tumut 2 underground Power Station (capacity 280,000 kW), thence discharging into Talbingo Reservoir, also on the Tumut River.

Tumut 3 Power Station, the largest station of the scheme (generating capacity 1,500,000 kW) and pumping capacity 10,500 cubic feet per second) is being constructed below Talbingo Reservoir and will discharge into Jounama Pondage on the Tumut River. This pondage will provide a downstream pumping pool and also regulate discharges from Tumut 3 Power Station as required. Releases from Jounama Pondage then enter Blowering Reservoir formed by Blowering Dam. This dam, constructed by the Snowy Mountains Authority as an agent for the State of New South Wales, provides for the regulation of power station discharges for irrigation use in the Murrumbidgee Valley. The Authority has constructed a power station at the foot of the dam to generate power from releases of water for irrigation purposes.

*Snowy-Murray Development.* The principal features of the Snowy-Murray Development are the diversion of the main stream of the Snowy River by tunnels, shafts, and pipelines westwards through

\* *See also* Chapter 23 Water Conservation and Irrigation of this issue and special detailed article in Year Book No. 42, pp. 1103-30.

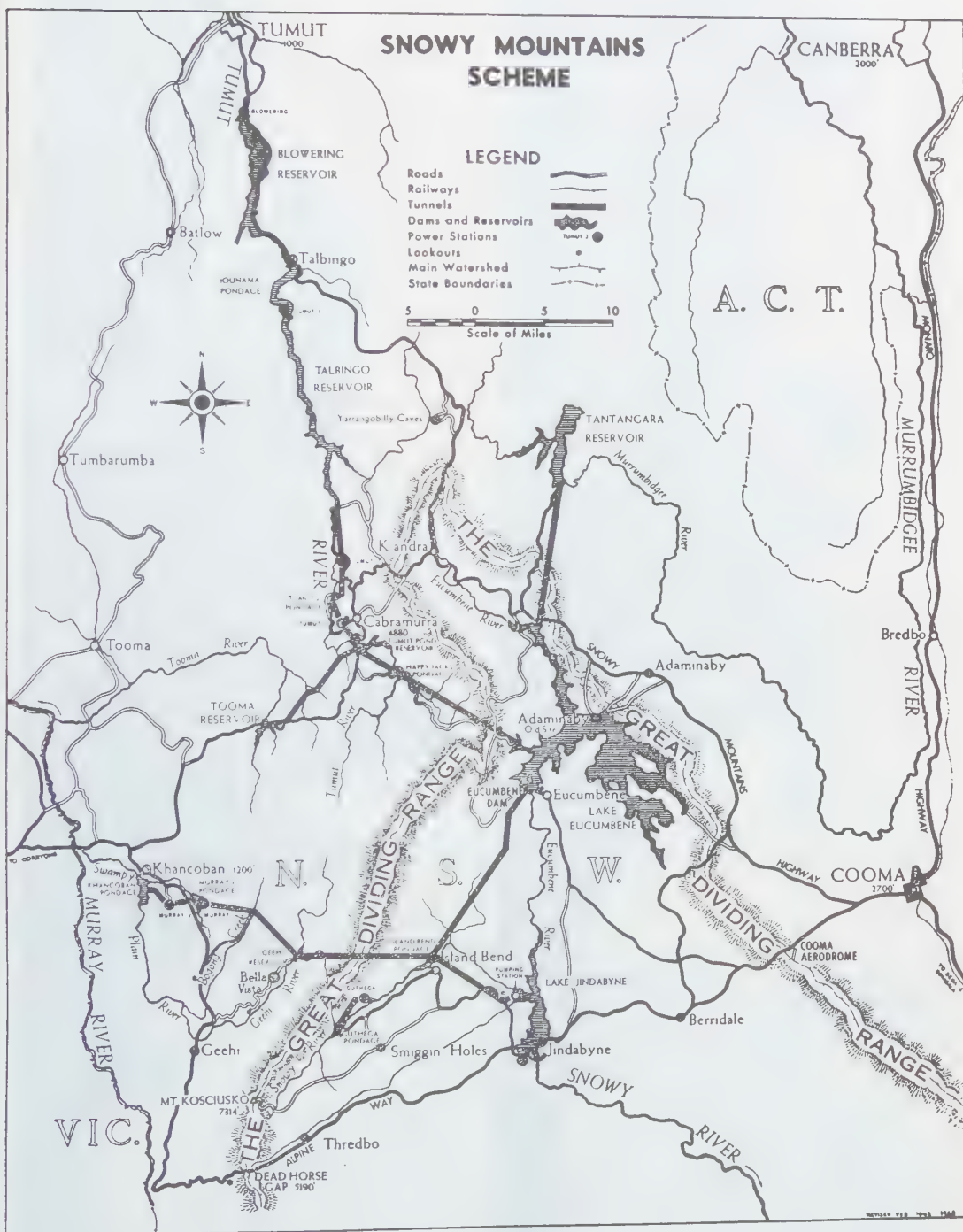


PLATE 53



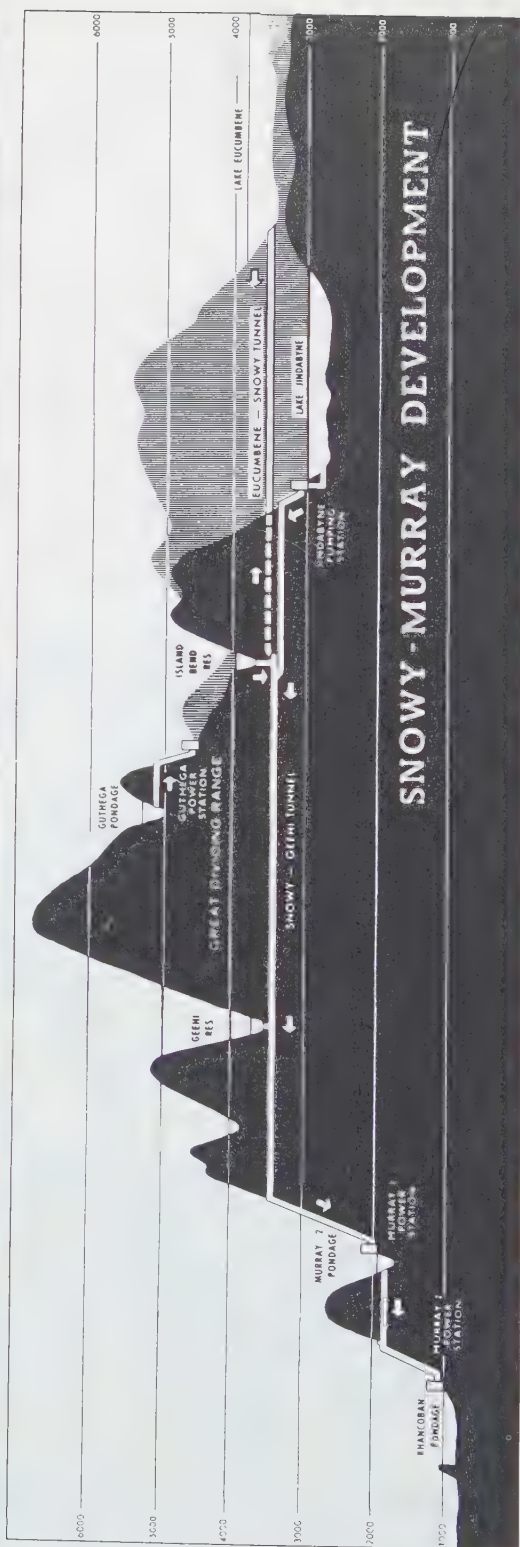
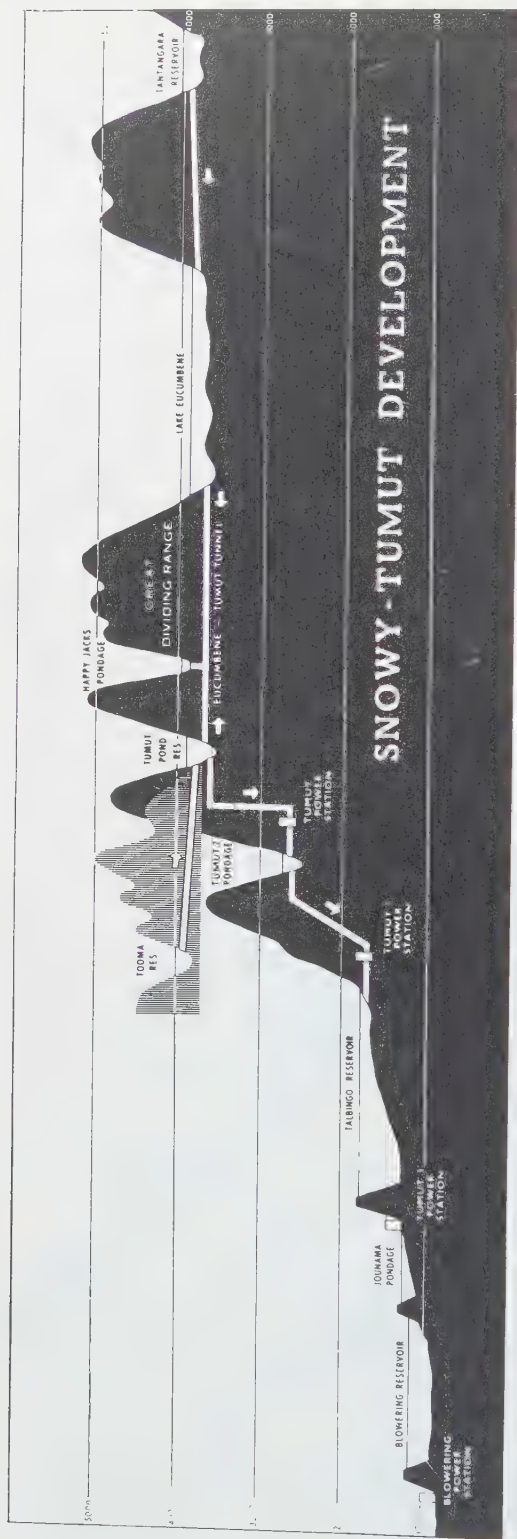


PLATE 54



the Great Dividing Range into the Swampy Plain River in the catchment of the Upper Murray, and the development of power on the western slopes of the Alps. The main works of the development are as follows.

- (a) A tunnel from the Snowy River near Island Bend through the Great Dividing Range to Geehi Reservoir on the Geehi River, and two power projects between Geehi Reservoir and the Swampy Plain River near Khancoban. The power stations associated with these two power projects, Murray 1 and Murray 2, have a combined capacity of 1,500,000 kW.
- (b) A tunnel from a dam on the Snowy River near Island Bend to Eucumbene Dam to carry Snowy water to Lake Eucumbene for storage at times of high river flows. When river flows are lower than average, this stored water is returned towards Island Bend and thence through the Snowy-Geehi Tunnel to Geehi Reservoir and Murray 1 and Murray 2 Power Stations.
- (c) A dam on the Snowy River near Jindabyne to store the residual flow of the Snowy and Eucumbene Rivers downstream from Island Bend and Eucumbene Dams, including the flows of major tributaries, the Crackenback and Mowamba Rivers; and a pumping plant, pipeline and tunnel to lift this water from Jindabyne Reservoir to the Snowy-Geehi Tunnel near Island Bend, where it joins the flow to the Geehi Reservoir for use through Murray 1 and Murray 2 Power Stations.

The power output of this section of the Scheme is increased by the Guthega Project, a subsidiary hydro-electric project on the Upper Snowy River above Island Bend with a generating capacity of 60,000 kW.

#### Utilisation of power from scheme

The future electric power plants on the mainland of Australia will be predominantly thermal or thermo-nuclear installations, and in an electrical system in which the greater part of the energy is generated in thermal plants it is usually found that the hydro installations operate to the best advantage on peak load. However, the existing New South Wales and Victorian systems include a proportion of relatively old and less efficient installations which, for reasons of fuel economy, are also best used for the production of peak load power. Therefore, in order to utilise the potential of the Snowy Mountains Scheme most effectively, the order of development was arranged so that the early stations operated, initially, somewhat below the peak of the system load, with a progressive change to predominantly peak load operation as construction proceeded and as the load increased in magnitude.

The Snowy Mountains Scheme is situated about midway between the principal load centres of Sydney and Melbourne and is connected to those cities by 330 kV transmission lines. It is, consequently, in a position to take advantage of the diversity in the power requirements of these two load systems, a most important factor in so far as it affects the economy of operation of the supply systems of the two States. Although most of the output from the scheme will go to the States of New South Wales and Victoria, the Commonwealth Government has the right to draw from the scheme its requirements of power and energy for the Australian Capital Territory and for defence purposes. For convenience, the Commonwealth's requirements are drawn from the New South Wales transmission network by an exchange arrangement between the Commonwealth and the Electricity Commission of New South Wales. Electricity over and above that required by the Commonwealth Government is divided between the States of New South Wales and Victoria in the ratio 2:1.

#### Progress of scheme and future programme

The scheme's first power station, Guthega, of 60,000 kW capacity, came into operation in February 1955. It was followed by Tumut 1, an underground power station with a capacity of 320,000 kW, in 1959, and by the 280,000 kW Tumut 2 underground Power Station in 1962. Eucumbene Dam, which provides the major regulating storage for the scheme, was completed in May 1958. Tumut Pond Dam, completed in September 1958, provides the balancing storage for the power stations of the Upper Tumut Works. The first trans-mountain diversion of water from Lake Eucumbene to the Tumut River at Tumut Pond was made possible when the 14-mile Eucumbene-Tumut Tunnel was completed in June 1959. The 10½-mile Murrumbidgee-Eucumbene Tunnel and the 9-mile Tooma-Tumut Tunnel came into operation early in 1961. Following the completion of the Upper Tumut Works, construction activity was concentrated on the Snowy-Murray Development. The first unit of this development, the Eucumbene-Snowy project which comprises Island Bend Dam and the 15-mile Eucumbene-Snowy Tunnel, commenced diverting Snowy River water to storage in Lake Eucumbene in August 1965. Completion of a 9-mile trans-mountain Snowy-Geehi Tunnel, the 7½-mile Murray 1 Pressure Tunnel, the first of the 1-mile long Pressure Pipelines, and the first two units of the 950,000 kW Murray 1 Power Station in April 1966 allowed the first diversion of the water from the Snowy River to the Murray River in the west. All of the ten turbo-generators were brought into commercial operation with the opening of the Murray 1 Project in July 1967.

Khancoban Dam, designed to regulate power station releases before their discharge into the Murray River, was completed in February 1966. The Murray 2 Project in the base of the open cut excavated in the bank of Khancoban Reservoir downstream of Murray 1 Project was completed in 1969. The four units of Murray 2 Power Station totalling 550,000 kW came into commercial operation in October 1969. Construction is also complete on the Jindabyne Project. The earth and rockfill dam was completed in September 1967, and the pumping station and Jindabyne-Island Bend Tunnel came into service in February 1969.

Blowering Dam on the Tumut River came into service in May 1968, and the 80,000 kW Blowering Power Station began commercial operation in August 1971.

The total installed capacity of the scheme has now reached 2,224,000 kW.

For the Tumut 3 Project the construction of Jounama Dam was completed in 1968 so that the storage of water in Blowering Dam could commence. Work is under way on the remaining sections of the Tumut 3 Project, and the six units in the power station are scheduled to be brought into service progressively from 1972 to 1974.

## STATES AND TERRITORIES

### New South Wales

In Year Book No. 39 an account was given in some detail of the origin and development of electricity generation and distribution in New South Wales. At present the following three main Acts govern electricity supply in New South Wales.

The Local Government Act, 1919, which lays down the various rights and responsibilities of local government bodies in the establishment and operation of electricity trading undertakings.

The Electricity Development Act, 1945, which established the Electricity Authority of New South Wales as the body responsible for the co-ordination of electricity supply throughout the State.

The Electricity Commission Act, 1950, which constituted the Electricity Commission of New South Wales as the major generating authority and not subject to the provisions of the Electricity Development Act.

#### Electricity Commission of New South Wales and electricity supply authorities

The main function of the Commission is the generation and transmission of electricity, which it sells in bulk to distributing authorities (mainly local government bodies) throughout a large part of the State, to the Government railways and to certain large industrial consumers. As the major generating authority, it is also responsible for the development of new power sources except in the Snowy Mountains region.

The retail sale of electricity to the public is, in general, carried out by separate electricity supply authorities. At 30 June 1971 there were 41 retail supply authorities throughout the State, comprising 34 electricity county councils (consisting of groups of shire and/or municipal councils), 2 city and 2 municipal councils, 1 shire council, and 2 private franchise holders. In addition to the Electricity Commission, 2 coal companies supply electricity in bulk to retail supplying authorities. Most of the small power stations which had operated in many country centres have closed down as the main transmission network has been extended.

Most electricity distribution areas have been consolidated into county districts consisting of a number of neighbouring local government areas grouped for electricity supply purposes, and administered by a county council comprising representatives elected by the constituent councils. Of the 225 cities, municipalities and shires in New South Wales, 217 are included in one or other of the thirty-four electricity county districts.

#### The Electricity Authority of New South Wales

The Electricity Development Act, 1945, confers broad powers on the Electricity Authority to co-ordinate and develop the public electricity supply industry. The functions of the Authority include the promotion of the use of electricity and especially its use for industrial and manufacturing purposes and for primary production. Technical advice is given to retail electricity supply authorities on various aspects of their activities such as the framing of retail electricity tariffs, public lighting and standardisation of materials and equipment. The Authority acts in an advisory capacity to the Minister for Local Government on electricity distribution matters generally, and may make recommendations concerning the organisation of distribution, the amendment of the law relating to the generation, transmission, distribution and supply of electricity, or on any other matters affecting the electricity distribution industry.

The Authority administers the Rural Electricity Subsidy Scheme under which the rural electrical development of the State has now been virtually completed where the extension of supply is economically feasible. Under the subsidy scheme, local electricity suppliers receive subsidies from the Authority towards the cost of new rural lines. At 30 June 1971 the Authority was committed to the payment of \$36,504,653 in subsidies, of which \$26,689,374 had been paid. Further details of the operation of the scheme are given on page 956, Year Book No. 56.

The Electricity Development Act contains provisions for the making of regulations relating to most aspects of electrical safety. Regulations now in force cover such matters as consumers' installations, licensing of electricians and electrical contractors, approval of electrical articles, safety of linemen, and overhead line construction and maintenance. In addition, a number of aspects not governed by legislation are covered by codes of practice or recommended procedures.

The Authority also administers the Traffic Route Lighting Subsidy Scheme, which provides for financial assistance to councils towards the cost of installation of improved lighting on traffic routes traversing built-up areas with the objective of reducing the incidence of night road accidents. Since the introduction of the scheme in 1964, subsidy has been approved in respect of some 582 miles of traffic routes throughout the State.

### Generation and transmission

Of the State's electrical power requirements during the year ended 30 June 1971, 82.5 per cent was generated by coal fired power stations in New South Wales, 0.3 per cent by internal combustion plants, 16.5 per cent by hydro-electric stations (including 13.7 per cent obtained direct from the Snowy Mountains Scheme). Interstate imports accounted for 0.7 per cent of the State's electricity requirements.

*Major generating stations.* At 30 June 1971 the major power stations of the State system of the Electricity Commission of New South Wales and their effective capacities were as follows: Liddell (Hunter Valley), 500,000 kW; Munmorah (Tuggerah Lakes), 1,400,000 kW; Vales Point (Lake Macquarie), 875,000 kW; Bunnerong (Sydney), 375,000 kW; Wangi (Lake Macquarie), 330,000 kW; Tallawarra (Lake Illawarra), 320,000 kW; Wallerawang (near Lithgow), 240,000 kW; Pyrmont (Sydney), 200,000 kW. The total effective capacity of the Electricity Commission's system as at 30 June 1971 was 4,929,000 kW. The greater part of the Commission's generating plant is concentrated within a hundred mile radius of Sydney.

*Major transmission network.* The retailing of electricity to 97 per cent of the population of New South Wales is in the hands of local distributing authorities, which obtain electricity in bulk from the Commission's major State network. This network of 330 kV, 132 kV, 66 kV and some 33 kV and 22 kV transmission lines, links the Commission's power stations with the load centres throughout the eastern portions of the State, extending geographically up to 400 miles inland.

At 30 June 1971 there were in service 1,366 route miles of 330 kV (including 64 miles operating for the time being at 132 kV) and 3,205 miles of 132 kV transmission lines (including 50 miles operating for the time being at 66 kV or lower). There were also in service 2,621 miles of transmission line of 66 kV and lower voltages, and 106 miles of underground cable. The installed transformer capacity at the Commission's 141 sub-stations was 17,485,000 kVA.

*Separate systems and total State installed capacity.* Several local government bodies operate their own power stations and generate portion of their requirements which is supplemented by inter-connection with the system of the Electricity Commission. Of these the more important are the Northern Rivers County Council (installed capacity 28,750 kW) and the North-West County Council (15,000 kW). In addition a private company operates small stations supplying the towns of Ivanhoe and Wilcannia. The aggregate effective capacity for the whole of New South Wales systems and isolated plants was 4,978,325 kW at 30 June 1971 and the number of ultimate consumers at this date was 1,613,967.

### Future development

The major new thermal stations already built and those now being developed on the coalfields will become the main base load supply sources for the State. Munmorah, located between Lakes Munmorah and Budgewoi, Vales Point and Wangi, on Lake Macquarie, Wallerawang, near Lithgow, and Tallawarra, on Lake Illawarra, have been completed.

The first 500,000 kW generating unit of the Liddell Power Station in the Hunter Valley was commissioned in 1971 and will be followed by the second, third and fourth units in 1972, 1973 and 1974. With a designed capacity of 2,000,000 kW Liddell is the biggest thermal power station yet planned for Australia.

Future projects include the installation of an additional 500,000 kW unit at Wallerawang, scheduled for commissioning in 1975, and two 660,000 kW units at Vales Point the first of which is expected to come into operation in 1977.



The development of the 330 kV main system is continuing. New work in hand includes the construction of major 330 kV transmission centres at Armidale, Wagga Wagga and East Sydney. Plans to augment the transmission system during the next five years provide for the construction of 1,200 route miles of 330 kV lines, 1,000 miles of 132 kV overhead lines, and 15 new sub-stations.

### Hydro-electricity

The greater part of the hydro-electric potential of New South Wales is concentrated in the Snowy Mountains area (see Snowy Mountains Hydro-electric Scheme, page 942). Apart from this area, major hydro-electric stations are in operation at the Warragamba Dam (50,000 kW), Hume Dam (50,000 kW) and Burrinjuck Dam (20,000 kW). There are, in addition, five smaller hydro-electric installations in operation in various parts of the State. A pumped-storage hydro-electric system to produce 240,000 kW by 1976, is being installed as part of the Shoalhaven Scheme in conjunction with the Metropolitan Water Sewerage and Drainage Board.

## Victoria

In Year Book No. 39 a detailed description is given of the development of electricity generation in the cities of Melbourne, Geelong, Bendigo and Ballarat up to the time of transfer of control of electricity undertakings in those cities to the State Electricity Commission of Victoria. An account is also given of the events culminating in the establishment of the Commission in 1919, and of the early developments in the Commission's undertakings.

### State Electricity Commission of Victoria

Constituted by the *Electricity Commissioners Act* 1918, the State Electricity Commission is a semi-government authority administered since 1921 by a full-time Chairman and three part-time Commissioners. The principal duty of the Commission is to co-ordinate and extend on an economic basis the supply of electricity throughout Victoria. For this purpose it is vested with power to erect own and operate power stations and other electrical plant and installations, supply electricity retail to individual consumers or in bulk to any corporation or public institution, acquire and operate electricity undertakings, develop, own and operate brown coal open cuts and briquetting works, and develop the State's hydro-electric resources. From its own revenues, which it controls, the Commission must meet all expenditure in the operation of its power and fuel undertakings and provide for statutory payments to State Consolidated Revenue.

The Commission is the controlling authority for all electrical undertakings in Victoria. It is responsible for the registration of electrical contractors, the licensing of electrical mechanics, the control of installation methods and material, and the testing and approval of electrical equipment and appliances.

Since it began operating in 1919 the State Electricity Commission has expanded and co-ordinated the production and supply of electricity on a State wide basis to the point where its system now generates almost all the electricity produced in Victoria and serves 99 per cent of the population. Victoria's electricity system is based on the utilisation of the extensive brown coal resources of the Latrobe Valley in Gippsland.

Output of brown coal in 1970-71 from the Commission's three open cuts at Yallourn, Morwell and Yallourn North totalled 21,539,000 tons, of which 17,432,000 tons were used in the Commission's power stations. A further 3,765,000 tons of brown coal were used to manufacture 1,369,000 tons of briquettes, of which 217,000 tons were burnt in power stations. The only other fuel used in power generation was 49,000 tons of oil.

Generation in thermal stations is supplemented by energy from the Commission's hydro stations in the mountains north-east of the State, and by hydro entitlements from the Snowy Mountains Scheme (one-third of the output after provision of the Commonwealth's needs) and Hume Power Station (half of the output).

### Electricity Supply

At 30 June 1971 the number of ultimate consumers in Victoria was 1,287,000 all served by the Commission except the extreme eastern settlements of Mallacoota (local generation) and Bendoc (supplied from an adjoining area of New South Wales).

The Commission sells electricity retail in all Victorian supply areas except for eleven metropolitan municipalities. These municipalities, retailing electricity under franchises granted before the Commission was established, take bulk supply from the Commission. Bulk supply is also provided to several New South Wales municipalities and irrigation settlements bordering the River Murray.



The Commission's retail consumers numbered over 1,045,000 at 30 June 1971. Of these some 877,000 were domestic, 77,000 industrial and 91,000 commercial. Retail supply is administered through the metropolitan branch and nine extra-metropolitan branches with headquarters at Geelong, Dandenong, Taralgon, Mildura, Ballarat, Benalla, Bendigo, Colac and Horsham. Branch and district supply offices are located in Melbourne and all other major cities and towns in Victoria.

Complete electrification of the State has virtually been achieved. By 30 June 1971 over one million homes and nearly 74,000 farms were supplied with electricity. Only a few remote areas remain out of reach of public supply mains.

#### **Electricity production, transmission and distribution**

Electricity generated in the State system or purchased by it totalled 14,086 million kWh in 1970-71. The system comprises a series of thermal and hydro-electric power stations. Inclusive of generator capacity both within the State and available to the Victorian system from outside the State, the total installed generator capacity at 30 June 1971 was 3,531,000 kW. Power stations are interconnected and feed electricity into a common pool for general supply. The major power station in the interconnected system is the Hazelwood brown coal burning power station near Morwell, which alone generates over 50 per cent of Victoria's electricity. Hazelwood, now completed, has eight 200,000 kW generating sets in service. Other power stations in the interconnected system comprise two further base load brown coal burning power stations, Morwell and Yallourn; steam stations in Melbourne (Newport, Richmond and Spencer Street), and Red Cliffs, which has, in addition, some internal combustion plant; and hydro-electric stations at Kiewa, at Eildon, on the Rubicon and Royston Rivers near Eildon, and at Cairn Curran. All generators for public supply within Victoria are Commission-owned, except Spencer Street Power Station, which remains the property of the Melbourne City Council, although operated as a unit of the interconnected system. The Victorian system is linked with the Snowy Mountains Scheme by a 330 kV transmission line, which also allows the interchange of energy between New South Wales and Victoria. The hydro station at Hume Dam on the River Murray is also linked with the Victorian interconnected system. Output and operating costs of this power station, owned by the Electricity Commission of New South Wales, are shared equally by the Electricity Commissions of Victoria and New South Wales.

The electrical transmission and distribution system in the State supply network at 30 June 1971 comprised over 62,000 miles of power-lines, 30 terminal receiving stations, 161 zone sub-stations, and more than 64,000 distribution sub-stations. Main transmission is by 500 kV, 330 kV, 220 kV, and 66 kV power lines which supply the principal distribution centres and also provide interconnection between the power stations. The 500 kV, 330 kV and 220 kV systems total over 1,900 route miles.

#### **Future development**

Yallourn 'W' Power Station, now under construction, is located about half a mile west of the present Yallourn Power Station. The station will be the fourth brown coal burning power project built by the Commission in the Latrobe Valley. Its capacity will be 700,000 kW, provided by two 350,000 kW turbo-generators, the first due to come into service in 1972 and the second in 1974. With this project in operation, the State's power resources, including Victoria's entitlement from the Snowy Mountains Hydro Electric Authority, will have increased from 3,531,000 kW at June 1971 to 4,785,000 kW in 1974, an increase of 36 per cent.

### **Queensland**

In Year Book No. 39 an account is given of the growth of electricity generation in Queensland, with particular reference to south-eastern Queensland, and of the events leading up to the establishment in 1937 of the State Electricity Commission of Queensland. In Year Book No. 53 an account is given of the post-war development and organisation of the electricity supply in Queensland.

Electricity supply in Queensland is governed by the following Acts which are administered by the Commission.

*'The State Electricity Commission Acts, 1937 to 1965.'* These Acts constituted the Commission and define its powers and duties.

*'The Electric Light and Power Acts, 1896 to 1967.'* These Acts relate to the constitution of electric authorities, except the Southern Electric Authority and the Northern Electric Authority, and define their powers and duties and the conditions under which electricity is to be supplied and used.

*'The Regional Electric Authorities Acts, 1945 to 1964.'* These Acts provide for the constitution of Regional Electricity Boards representative of the Commission and the Local Authorities within each region, and define their powers and responsibilities.

'*The Southern Electric Authority of Queensland Acts, 1952 to 1964.*' These Acts established the Southern Electric Authority and define the powers and responsibilities of the Authority.

'*The Northern Electric Authority of Queensland Acts, 1963 to 1964.*' These Acts established the Northern Electric Authority. They also define its powers and responsibilities.

'*The Electrical Workers and Contractors Acts, 1962 to 1968.*' These Acts provide for the certification of electrical workers and for the licensing of electrical contractors.

### State Electricity Commission of Queensland

The Commission commenced to function in January 1938. The Commission is the statutory authority concerned, *inter alia*, with the administration of electricity supply legislation, the general control, organisation and efficient development of the electricity supply industry in Queensland, the forward planning of such development, the control of electricity charges, the administration of regulations and rules relating to safety, the raising of capital, the provision of engineering and consulting services, the promotion of the use of electricity, particularly in manufacturing and rural industries, and the fixing of standards. In addition, it is an authority to which consumers may appeal on matters in dispute between them and their electric authorities. The Commission is also empowered to own and operate generating stations and transmission lines and to sell electricity in bulk.

### Organisation

Regional electrification, with centralised generation and main transmission, is the predominant feature of the organisation of the electricity supply industry in Queensland. The more populous eastern part of the State is served by three major networks.

The southern network embraces the areas of supply of the Southern Electric Authority, the Brisbane City Council, the Wide Bay-Burnett Regional Electricity Board, and the Dalby Town Council. Generation and main transmission in this area are the responsibility of the Southern Electric Authority, which sells energy in bulk to the other three Authorities. The Wide Bay-Burnett Board also operates its own base load power station at Howard. The Southern Electric Authority is also responsible for the distribution of electricity to a large rural area outside metropolitan Brisbane.

The central network is within the area of supply of the Capricornia Regional Electricity Board, which is responsible for the generation, main transmission and distribution of electricity.

The northern network covers the areas of supply of the Cairns, Townsville, and Mackay Regional Electricity Boards. Generation and main transmission are the responsibility of the Northern Electricity Authority, and electricity is purchased in bulk for distribution by the three Regional Electricity Boards. In addition, the Cairns Regional Electricity Board operates small internal combustion generating stations at certain isolated centres in its area, and the Townsville Regional Electricity Board supplies the western area of its region by means of a distribution system based on an internal combustion station at Hughenden.

At present there is no interconnection between these three main networks, but work has started on the construction of 275 kV transmission lines between central and southern Queensland, to link the two supply systems. West of the three main networks the form of organisation which has been adopted is determined by the stage of electrical development which has been reached. Immediately west of the Capricornia region the Central Western Regional Electricity Board operates with generation centralised at internal combustion stations at Longreach and Barcaldine. Other smaller regions of electricity supply are centred on Roma and Mount Isa. In addition, parts of southern Queensland are supplied by the Tenterfield Municipal Council and the North West County Council of New South Wales. In the remaining parts of Western Queensland there are a number of isolated electricity undertakings operated by Shire Councils.

The organisation of the industry in Queensland is moving progressively towards a greater integration of generating authorities so that the production of electricity can be centred to an increasing extent on larger and more efficient power stations.

### Electricity generation, transmission and distribution

Electricity generated in the State is based primarily on black coal, 90.0 per cent of the total production during 1970-71 being derived from this fuel. Hydro-electric stations, located mainly in North Queensland, provided 8.9 per cent, and the balance of the production was provided from internal combustion and gas turbine stations. The gas turbine stations are located at Rockhampton, Swanbank and Middle Ridge, near Toowoomba and use fuel oil as their primary energy source. All of the internal combustion stations use oil as fuel but the power station at Roma uses locally produced natural gas and crude oil. Electricity generated in Queensland in power stations during 1970-71 totalled 6,331 million kWh. A further 20 million units were purchased in bulk from other producers of electricity for re-distribution to consumers.

At 30 June 1971 the total generating capacity of all Queensland power stations was 1,858,898 kW comprising 1,571,000 kW of steam plant, 135,208 kW of hydro-electric plant, 37,690 kW of internal combustion plant and 115,000 kW gas turbine plant.

The Southern electricity network is served by the following major power stations: Bulimba 'A' (65,000 kW), Bulimba 'B' (180,000 kW), Tennyson 'A' (120,000 kW), Tennyson 'B' (120,000 kW), Swanbank 'A' (396,000 kW), Swanbank 'B' (240,000 kW) and Howard (37,500 kW) together with gas turbine stations—Swanbank 'C' (30,000 kW) and Middle Ridge (60,000 kW). The central network is served by power stations at Rockhampton (52,500 kW steam and 25,000 kW gas turbine) and at Callide (120,000 kW). In the northern electricity network the principal power stations are at Townsville (37,500 kW), Kareeya (72,000 kW), Barron Gorge (60,000 kW) and Collinsville (120,000 kW). Most of the power stations in the major eastern supply networks of the State are thermal using coal as their primary energy source. The State's two large hydro-electric power stations are in the Cairns region in North Queensland, at Kareeya (72,000 kW) and Barron Gorge (60,000 kW).

Peak load and emergency gas turbine stations have been built at Rockhampton (25,000 kW) and Swanbank 'C' (30,000 kW) and the State's largest gas turbine station to date, at Middle Ridge near Toowoomba (60,000 kW).

The electrical transmission and distribution systems within the State comprised over 51,000 circuit miles of electric lines at 30 June 1971. The main transmission voltages are 132 kV, 110 kV, 66 kV and in certain areas 33 kV. Work has started on the construction of 275 kV transmission lines in southern Queensland and also between Gladstone and Brisbane, the first time transmission lines of such high voltage have been built in Queensland. The electricity supply industry's extensive rural electrification programme has been continued using the single wire earth return system.

At 30 June 1971 the total number of electricity consumers was 581,196 of whom 225,229 were in the Brisbane metropolitan area.

#### **Future development**

Major development of the State's generating capacity is concentrated on the construction of the following major power stations, at Gladstone (1,100,000 kW) and Swanbank 'B' (480,000 kW), and the construction of extensions to Collinsville, known as Collinsville 'B' (120,000 kW). The first of Swanbank 'B's' four 120,000 kW generating sets was commissioned during 1969-70 and the station is expected to become fully operative in 1973. The Gladstone power station will comprise four 275,000 kW generating sets, the first of which is expected to be commissioned by the end of 1974. The output of these two power stations will help to meet increasing demands for power over the planned southern and central interconnected systems.

In North Queensland the fourth and final 30,000 kW generating set for Collinsville 'A' was commissioned in 1971. This will be followed by a major extension programme, known as Collinsville 'B', which will involve the commissioning of two 60,000 kW sets, and will give Collinsville a total generating capacity of 240,000 kW. The two sets are scheduled for commissioning in 1974 and 1977 respectively.

Investigations are already in hand for the planning of another major power station to follow the Gladstone project, as well as the economic feasibility of further interconnection of the State's electricity supply systems.

### **South Australia**

A general historical survey concerning the electricity supply industry in South Australia is given in Year Book No. 39, page 1186. The survey traces the development of the industry from its formation in South Australia in 1895 until the establishment of the South Australian Electricity Commission in 1943.

#### **Electricity Trust of South Australia**

In 1946 the assets of the Adelaide Electric Supply Co. Ltd were transferred to a newly formed public authority, the Electricity Trust of South Australia, which became responsible for unification and co-ordination of the major portion of the State's electricity supply and which took over the powers previously vested in the South Australian Electricity Commission. In addition to the powers specified in the Adelaide Electric Supply Company's Acts, 1897-1931, the Trust may supply electricity direct to consumers within a district or municipality with the approval of the local authority, and by agreement with other organisations which generate or supply electricity, arrange to inter-connect the mains of the Trust with those of other organisations, and give or receive supplies of electricity in bulk.



### Capacity and production

Of the total installed capacity in South Australia at 30 June 1971, the Electricity Trust operated plant with a capacity of 1,081,000 kW, and is the most important authority supplying electricity in the State. There were approximately 438,000 ultimate consumers of electricity in the State, of whom 431,000 were supplied directly and approximately 7,000 indirectly (i.e. through bulk supply) by the Trust. Its major steam stations are Osborne 'B' (240,000 kW), Port Augusta Playford 'A' (90,000 kW) and Playford 'B' (240,000 kW), and Torrens Island (480,000 kW).

The Trust operates two smaller power stations, the Mt Gambier Station has an installed capacity of 22,000 kW and Pt Lincoln 9,000 kW—both locations are connected with the Trust's interconnected system with 132 kV lines.

The two main fuels used by the Trust are sub-bituminous coal from Leigh Creek for the Port Augusta, Playford power stations and natural gas from the Gidgealpa-Moomba field for the Torrens Island station.

## Western Australia

For information on the early history of electricity supply in the metropolitan area, see Year Book No. 39, page 1189.

### State Electricity Commission of Western Australia

The State Electricity Commission of Western Australia is empowered to co-ordinate all power undertakings in the State and to encourage and promote the use of electricity and other power. The Commission provides central power station supply through an interconnected grid system to the Metropolitan Area, the South-West and Great Southern areas, and an area extending eastward to Koolyanobbing. Beyond the limits of the interconnected system power is supplied to towns by diesel power stations operated by the Commission, local government authorities, private concessionaires, or mining companies. A scheme known as the Northern Areas State Power Scheme is also being developed. For this scheme the Commission purchases power in bulk to supply districts between Northampton and Dongara and to Perenjori and Morawa.

The total number of consumers at 30 June 1971 was 274,422, of whom 255,551 were supplied by the Commission. The number of consumers on rural holdings supplied by the Commission at 30 June 1971 was 13,867.

The activities of the interconnected system for the year ended 30 June 1971 were as follows: plant capacity, 529,500 kW; units generated, 2,446 million kWh; fuel used per unit (kWh) generated, 1.38 lb; coal used, 1,122,832 tons.

The first and second 120,000 kW units at the new Kwinana thermal generating station were commissioned in September 1970 and in March 1972 respectively. Two additional 120,000 kW units will be installed at the station before 1973, and two 200,000 kW units are scheduled for installation in 1975 and 1976.

## Tasmania

A considerable part of the water catchment in Tasmania is at high level, with a substantial natural storage available, and this has made it possible to produce energy at a lower cost than elsewhere in Australia or in most other countries. Another factor contributing to the low cost is that rainfall is distributed fairly evenly throughout the year with comparatively small yearly variations. The abundant and comparatively cheap supplies of electricity and other natural resources have attracted to Tasmania a number of important secondary industries, including large electro-chemical and metallurgical works with high load factor (in consequence of which the system load factor is also very high—70 per cent), for which energy costs constitute a large proportion of the total cost of production. The continuous power demand of these organisations when plant is in full operation aggregates 390,000 kW. For information on hydro-electric development in Tasmania prior to the establishment of the Hydro-Electric Commission in 1930, see Year Book No. 39, pages 1192–3.

### Hydro-Electric Commission

In 1929 the Government passed the *Hydro-Electric Commission Act 1929*, which established the Hydro-Electric Commission and vested in the Commission, with some minor exceptions, the right to use the waters of the State of Tasmania, and authorised it to develop and reticulate electric power for all purposes. In 1930 this corporate body took over the State hydro-electric undertaking and the business of the Hydro-Electric Department.



**Output and capacity of hydro-electric system**

The following table outlines the development of the Tasmanian generating system.

**TASMANIAN POWER GENERATING SYSTEM**

<i>Station</i>	<i>Year of completion</i>	<i>Head (in feet)</i>	<i>Generator capacity (kW)(a)</i>	<i>Average annual output (million kWh units)</i>
<b>COMPLETED STATIONS</b>				
Waddamana 'B'	1949	1,127	48,000	(t)
Tarraleah . . . . .	1951	981	90,000	593
Butlers Gorge . . . . .	1951	184	12,200	63
Trevallyn . . . . .	1955	415	80,000	541
Tungatinah . . . . .	1956	1,005	125,000	560
Lake Echo . . . . .	1956	568	32,400	76
Wayatinah . . . . .	1957	203	38,250	274
Liapootah . . . . .	1960	361	83,700	455
Catagunya . . . . .	1962	142	48,000	260
Poatina . . . . .	1965	2,720	250,000	1,322
Tods Corner . . . . .	1966	136	1,600	13
Meadowbank . . . . .	1967	95	40,000	209
Cluny . . . . .	1967	51	17,000	105
Repulse . . . . .	1968	88	28,000	160
Rowallan . . . . .	1968	161	10,450	40
Lemonthyme . . . . .	1969	523	51,000	286
Devils Gate . . . . .	1969	226	60,000	300
Wilmot . . . . .	1971	825	30,600	126
Bell Bay . . . . .	1971	(c)	120,000	788
Cethana . . . . .	1971	324	85,000	409
<i>Total</i> . . . . .	..	..	1,251,200	6,580
<b>STATIONS UNDER CONSTRUCTION</b>				
Paloona . . . . .	1972	103	28,000	130
Fisher . . . . .	1972	2,115	43,200	247
Bell Bay, Stage 2 . . . . .	1974	(c)	120,000	739
Gordon, Stage 1 . . . . .	1976	610	240,000	1,445
<i>Total</i> . . . . .	..	..	431,200	2,561
<b>ALL STATIONS</b>				
<b>Grand Total</b> . . . . .	..	..	<b>1,682,400</b>	<b>9,141</b>

(a) Emergency gas turbine generating capacity of 21,000 kW at Bell Bay and 10,000 kW at Macquarie Point (Hobart) not included. (b) Reserve plant only. (c) Thermal station.

The number of ultimate consumers at 30 June 1971 was 149,911.

**New capacity**

The Hydro-Electric Commission is engaged on a construction programme comprising the Mersey-Forth Power Development, and the Gordon River Power Development, Stage 1.

The Mersey-Forth Power Development is scheduled to be completed by 1972. This development involves diversion of the Mersey and Wilmot Rivers and their tributaries into the Forth River and the construction of seven distinct power stations. The project will add a total of 308,250 kW to the system. The first stage of the Gordon River Power Development involves the construction of a dam and a power station with a proposed instalment of 240,000 kW capacity with provision for an increase to 320,000 kW. An oil-fired thermal station with a single 120,000 kW generator was completed at Bell Bay on the River Tamar in 1970. The second stage of the station which will double the capacity is expected to be completed by 1974.

The Commission is conducting extensive surveys and investigation of other schemes with a view to further construction after the completion of the present programme. It is estimated that the potential which can be developed economically should ultimately harness 3,000,000 kW to the system.

## Commonwealth Territories

### Australian Capital Territory

The supply authority is the A.C.T. Electricity Authority, which took over the functions of the Canberra Electric Supply Branch, Department of the Interior, on 1 July 1963. Supply was first made available in Canberra during 1915 and was met from local steam plant. Connection to the New South Wales interconnected system was effected in 1929, and all requirements are now taken from this system. Locally owned plant consists of 4,000 kW of diesel alternators which are retained as a standby for essential supplies. The total number of ultimate consumers at 30 June 1971 was 45,251. During the year 1970-71 the bulk electricity purchased was 567,416,000 kWh and the system maximum demand was 150,800 kW.

### Northern Territory

Electricity is supplied in the main population centres of the Northern Territory by the Northern Territory Administration under the provisions of the *Supply of Services Ordinance* 1952-1965 and the Electricity Supply Regulations made pursuant thereto.

A steam turbo-generating station is operated together with an extensive distribution system in Darwin, and diesel generating stations and distribution systems at Alice Springs, Katherine, Pine Creek and Elliot. At Tennant Creek supplies of electricity are purchased in bulk from Peko Mines N.L. and sold to consumers through a distribution system owned by the Northern Territory Administration.

Capacities of generating stations as at 30 June, 1971 were: Darwin 47,000 kW, Alice Springs 9,704 kW, Katherine 5,403 kW, Pine Creek 200 kW, Elliot 150 kW.

The total number of consumers served in the Territory as at 30 June 1971 was 12,382, an increase of 11.8 per cent over that of the previous year.

### Papua New Guinea

For details of electric power generation and distribution *see* Chapter 28, The Territories of Australia.

## Statistical Summary

For a summary of operations of electricity establishments in 1968-69 and 1969-70, *see* Chapter 21, Manufacturing Industry, pages 726-7. The information contained therein is not comparable with that contained in previous issues of the Year Book; for an explanation of the differences *see* page 719 of this issue.

## CHAPTER 28

### THE TERRITORIES OF AUSTRALIA

The internal Territories of Australia are the Northern Territory and the Australian Capital Territory. External Territories under the control of Australia are: Norfolk Island; the Territory of Papua (formerly British New Guinea); the Territory of New Guinea (under Trusteeship Agreement with the United Nations); the Territory of Heard and McDonald Islands; the Australian Antarctic Territory; the Territory of Cocos (Keeling) Islands; and the Territory of Christmas Island. There is also the Territory of Ashmore and Cartier Islands, deemed to form part of the Northern Territory.

Information on all except Ashmore and Cartier Islands is contained in the following pages, and details of the acquisition of all the Territories will be found on pages 5, 22, and 23 of Chapter 1. More detailed statistics and additional descriptive matter are to be found in the Annual Reports of the Administrations of the various Territories and in the *Northern Territory Statistical Summary* (1.6) and the *Australian Capital Territory Statistical Summary* (1.7) issued by this Bureau. Statistics for the Northern Territory and the Australian Capital Territory are also included in chapters dealing with particular subjects. The Statistician, Papua New Guinea, issues a number of publications containing statistics relative to these two Territories, separate and combined.

Responsibility for the general administration of the Territories of Norfolk Island, Papua New Guinea, Cocos (Keeling) Islands and Christmas Island is vested with the Commonwealth Department of External Territories; for the Northern Territory (including Ashmore and Cartier Islands) and the Australian Capital Territory with the Department of the Interior; and for Antarctica and Heard and McDonald Islands with the Department of Supply. Matters excepted are defence and civil aviation, and, in the Northern Territory and the Australian Capital Territory, public health, justice, education (excluding Aborigines), postal and communications and the construction and operation of the basic physical services, which are the responsibility of the Department of Health, the Attorney-General's Department, the Department of Education and Science, the Postmaster-General's Department and the Department of Works, respectively.

### THE NORTHERN TERRITORY

#### General description

##### Area

Upon the extension of New South Wales westwards to the 129th east meridian in 1825, the Northern Territory was incorporated in that colony, but in 1863 it was annexed by Royal Letters Patent to the province of South Australia. With the adjacent islands, it was transferred to the Commonwealth on 1 January 1911. The total area is 520,280 square miles.

##### Legislation and administration

On 1 January 1911 the Territory was transferred from South Australia to the Commonwealth. The terms were outlined in Year Book No. 15, page 940.

The *Northern Territory (Administration) Act* 1910-1972 provides for an Administrator, appointed by the Governor-General, to administer the Territory on behalf of the Commonwealth.

It provides for a Legislative Council for the Northern Territory to make ordinances for the peace, order and good government of the Territory. This Council consists of six official members and eleven elected members. A President of the Council is elected from among the elected members. Money votes may be proposed in the Council only upon recommendation by message of the Administrator.

Ordinances are presented to the Administrator for assent. He is obliged to reserve ordinances relating to certain matters, including Crown lands and Aborigines, for the Governor-General's pleasure. Others he may assent to, withhold assent from, or return to the Legislative Council with recommended amendments. The Governor-General may within six months, disallow any ordinance assented to by the Administrator and, in respect of an ordinance reserved for his pleasure, he may assent, withhold assent, withhold assent to part of the ordinance and assent to the remainder, or recommend to the Administrator any amendments to the laws of the Territory that he considers desirable arising out of his consideration of the ordinance.

The Act also provides for an Administrator's Council to advise the Administrator on any matter referred to it, either by the Administrator, or in accordance with the provisions of any ordinance of the Northern Territory. The Council consists of the Administrator, and two official and three elected members of the Legislative Council.

The Territory elects one member to the House of Representatives.

The Corporation of the City of Darwin was established in 1957. The Corporation comprises a Mayor and ten aldermen (two for each ward) elected by adult franchise. Alice Springs was constituted a municipality on 25 June 1971 and the first election held on 26 June 1971. The Alice Springs Corporation consists of a Mayor and eight aldermen elected by adult franchise. Elsewhere in the Territory, municipal services are provided by the Administration. Town Management Boards are established in Katherine and Tennant Creek. Each of these boards consists of five members elected by adult franchise and four members appointed by the Administrator. The function of the Boards is to advise the Administrator on local matters.

### Physical geography

The Territory is within the torrid zone, with the exception of a strip about 180 miles wide which lies south of the Tropic of Capricorn.

The low flat coastline seldom reaches a height of 100 feet. Sandy beaches and mud flats, thickly fringed with mangroves, prevail. Sandstone, marl and laterite form the occasional cliffy headlands. The coastline of more than 1,000 miles is indented by bays and inlets and intersected by numerous rivers, many of which are navigable for considerable distances from their estuaries. The only practicable deep-water port for general use, however, is Darwin.

Inland the country generally is devoid of conspicuous landmarks. From the coast there is a general rise southwards to the vicinity of the seventeenth or eighteenth parallel of south latitude, where the higher lands form the watershed between the rivers that flow northwards to the sea and those that form the scanty supply for the interior system. Towards the centre of the continent the land over a wide area is of considerable elevation, and there are several mountain ranges, generally with an east and west trend.

### Climate, fauna and flora

There are two main climatic divisions, the wet season, November to April, and the dry season, May to October, with uniform and regular changes of weather. Nearly all the rainfall occurs in the summer months.

The ordinary types of native Australian fauna inhabit the Territory. As elsewhere on the continent, the higher *Theria* are rare, but marsupials, birds, crocodiles, fresh-water tortoises, snakes (mostly non-venomous), and frogs abound. There are many varieties of fresh-water fish and littoral *Mollusca*. Butterflies and beetles are strongly represented. The termite is a pest which is capable of serious damage to wooden buildings unless special preventive measures are taken. Mosquitoes and sandflies are very troublesome in the "top end" particularly in the wet season. Most types of native fauna are protected and buffaloes exist in large herds on the northern coastal plains.

The vegetation is north Australian in type but a number of forms belong to the Malayan and Oceanic regions. The climate and generally poor soils associated with it give rise to tropical savannah vegetation, with the size and volume of woody material present being closely related to rainfall and the quality of the forests decreasing strikingly as one proceeds inland from the northern coastline. In the north, cypress pine which is termite resistant, ironwood, bloodwood and paperbark timbers are cut and milled for local building purposes. Further inland particularly on the Barkly Tableland and parts of the Victoria River district there are better grazing grasses and some shrubs, while the wide belt of sandy plain between the Barkly Tableland and the ranges in the Alice Springs area, carries mainly spinifex grass and low scrub. The Alice Springs ranges and uplands carry chiefly a dwarf acacia scrub known as mulga, spinifex and other sparse grasses. The principal orders represented in the interior are *Euphorbiaceae*, *Compositae*, *Convolvulaceae*, *Rubiaceae*, *Goodeniaceae*, *Leguminosae* and *Utricaceae*.



## Population

See also the chapters Population and Vital Statistics.

The estimated population of the Northern Territory at 30 June 1971 (preliminary census figures), including Aborigines, was 48,159 males, 37,360 females, 85,519 persons. The Aboriginal population at the census of 30 June 1966 totalled 10,651 males, 10,468 females, 21,119 persons. While few Aborigines now live outside settled areas and not all choose to live on reserves, a large area of reserved land totalling 94,196 square miles has been maintained to provide economic resources from which the Aborigines may benefit either directly or from royalty payments.

## Advancement of Aborigines

### Policy

The objectives of Commonwealth Government policies relating to the Aboriginal people as stated on 26 January 1972 are.

- (a) That they should be assisted as individuals and if they wish as groups, at the local community level, to hold effective and respected places within one Australian society with equal access to the rights and opportunities it provides and acceptance of responsibilities towards it.

At the same time they should be encouraged and assisted to preserve and develop their own culture, languages, traditions and arts so that these can become living elements in the diverse culture of the Australian society.

- (b) That the Government recognises the rights of individual Aborigines to effective choice about the degree to which, and the pace at which they come to identify themselves with that society; and believes that they will do so more readily and more happily when they are attracted to it voluntarily and when their membership of it encourages them to maintain and take pride in their identity, traditions and culture.

The concept of separate development as a long-term aim is utterly alien to these objectives.

- (c) The Government also believes that programmes to give effect to such a policy must evolve in accordance with the effects of action so far taken and the needs of the times. They must take into account the expressed wishes of Aboriginal Australians themselves. Programmes will prove ineffective unless Aboriginal Australians are voluntarily involved. The role of governments should increasingly be to enable them to achieve their goals by their own efforts.

- (d) The Government considers that a balanced strategy directed at the essential problems facing many persons of Aboriginal descent requires a programme of action worked out and administered in collaboration with the States which would:

- (i) encourage and strengthen their capacity increasingly to manage their own affairs—as individuals, as groups, and as communities at the local level;
- (ii) increase their economic independence;
- (iii) reduce existing social and other handicaps facing them in health, housing, education and vocational training; and
- (iv) promote their enjoyment of normal civil liberties and eliminate remaining provisions in law which discriminate against them.

### Legal status

Under the *Nationality and Citizenship Act* 1948–1966, all Aborigines are British subjects and Australian citizens. Since the commencement of the *Social Welfare Ordinance* 1964–1971 in September 1964, Aborigines in the Northern Territory have been equal at law with all other residents, although some special benefits have been retained for them or have been introduced since then. The Ordinance enables assistance to be given to any person who is socially or economically in need.

### Special schools for Aborigines

While the Department of Education and Science is now responsible for community education in the Northern Territory, special schools and pre-schools for Aboriginal children remain the responsibility of the Welfare Branch of the Administration. These special schools and pre-schools are intended as an interim measure only, policy being that all Aboriginal children should eventually receive their education in the community schools. Following expert inquiries, however, it was decided that schools should be established having a syllabus and school texts which take account of the social and cultural

background of the Aborigines. In these schools there is a shift of emphasis from theoretical to practical subjects, but where progress warrants it, the child transfers to the ordinary curriculum leading to the general community schools. A transitional school system has also been established, and one of its main objectives is to provide a bridge between the special schools and the community high schools.

Fifty-eight special schools for Aboriginal children had been established by the middle of 1971. Forty-nine of these were conducted by the Administration and nine by missions. Government subsidies were provided to the missions. Twenty-four pre-school centres had also been established. Nineteen of these were conducted by the Administration and five by the missions.

### **Assistance to Aborigines**

In recent years Aborigines have developed an interest in mineral prospecting and a number have obtained exploration licences both inside and outside reserves. Some Aboriginal holders of exploration licences are carrying out their own prospecting programmes, while others have negotiated arrangements with exploration and mining companies. Two Aboriginal groups in Central Australia are carrying out small scale mining operations, mining copper and amethyst. A policy whereby preferential treatment may be given to Aborigines applying for exploration licences was announced in a statement of Commonwealth Government policies relating to Aborigines on 26 January 1972.

Significant mining ventures have been established within reserves at Groote Eylandt and Gove and another is expected to be developed in the near future at Oenpelli. The grant of mining rights on reserves is subject to special conditions relating to the employment of Aborigines, the protection of their interests and welfare and the opportunity for their effective participation in the enterprise. The basic objective of this approach is to ensure that companies concerned co-operate with the Government to ensure that the Aboriginal communities concerned share directly in the economic benefits to be derived from mining development and conduct their efforts with respect and consideration for the traditional way of life of the Aboriginal people in the area.

Royalties from the mineral and timber activities carried on within reserves are paid into the Aborigines Benefits Trust Fund, established in 1952. The Minister for the Interior may authorise loans or grants from the fund to any Aboriginal or group of Aborigines in the Northern Territory. In this matter the Minister has the assistance of a special advisory committee which includes a majority of Aboriginal representatives. Moneys in the fund may be used for a wide variety of purposes which would benefit the Aboriginal people. Approved disbursements from the fund totalled \$1,733,000 at 30 June 1972.

In accordance with an undertaking in the Statement of Commonwealth Government policies, 10 per cent of the royalties paid by the mining company at Gove are paid into a special trust fund for the use of Aborigines at Yirrkala; it is estimated that, by 1975, \$228,000 will be paid to this fund and thereafter, until 1980, income will continue at a level of approximately \$74,000 per annum.

Financial assistance is available from the Aborigines Benefits Trust Fund to Aborigines and groups of Aborigines who wish to develop their own commercial or industrial enterprises. Assistance is also available from the Capital Fund for Aboriginal enterprises controlled by the Minister for the Environment, Aborigines and the Arts. In addition to financial assistance, Aboriginal enterprises have available to them, through the Northern Territory Administration or the Commonwealth Capital Fund for Aboriginal enterprises, technical advice and managerial expertise to further assist their establishment.

### **Social development**

Throughout the Northern Territory, but particularly among settlement and mission communities, an intensive programme is being carried out to equip Aborigines to meet the demands of modern living. These communities provide housing, health services, education, vocational training and employment for any Aboriginal wishing to avail himself of such services. Aborigines are increasingly participating in the management of these communities through local village councils.

An Aboriginal Advisory Council of 12 Aborigines, each representing a district of the Northern Territory, was established in early 1971 to advise the Minister for the Interior on Aboriginal issues in the Territory. Its meetings, held approximately once every three months, may be attended by officers of the Northern Territory Administration only at the invitation of the Council itself.

### **Leases to Aborigines**

An area of over 94,000 square miles has been reserved for the use and benefit of Aborigines in the Northern Territory.

Since new legislation was introduced in December 1970 Aborigines have had greater opportunities to obtain leases on reserves. Applications for leases are considered by special Land Boards which include two local Aboriginal members. The boards consult with Aborigines in the area and church organisations before making recommendations to the Administrator.

At 30 June 1972, ninety-one leases had been approved for housing, recreation, business, tourist and ceremonial purposes. In addition, three leases for pastoral purposes had also been approved for Aboriginal companies. These leases were to the Yugul Cattle Co. (over 2,100 square miles) at Roper River, the Gulperan Pastoral Co. (over 2,290 square miles) in the Bulman area and the Daly River Pastoral Co. (over 1,126 square miles) north of the Moyle River. Action is proceeding with a further thirty-eight applications for leases on reserves including twenty for pastoral purposes over significant areas ranging up to 5,000 square miles.

On 26 January 1972 it was announced that the Government would introduce legislation for a new form of lease within Aboriginal reserves which would be called general purposes leases. These leases would allow for a combination of activities such as pastoral, agricultural, market garden, plantation, orchard, vineyards, poultry farming, piggery, residential, business (not mining), commercial and social purposes. The leases would be granted where applicants could demonstrate their intention and ability to make reasonable use of the land for economic and social purposes, provided there was no conflict with the interests of any other Aboriginal community or group.

The legislation for general purposes leases was passed at the June 1972 sittings of the Northern Territory Legislative Council and was reserved for the Governor-General's pleasure.

It was also announced in January that the Government would make available \$5 million in 1972 and \$2 million in each of the next 4 years to acquire, for Aborigines living outside reserves, properties that became available in the States and the Northern Territory. The land would be purchased by agreement with the owner under the provisions of the Lands Acquisition Act.

Greater protection has been given to Aboriginal reserves by recent legislation which provides that a reserve cannot be revoked in whole or part without the proposed revocation first being tabled in the Legislative Council and in both Houses of Parliament to allow debate if desired.

Aborigines already have the right to hunt and forage over land in pastoral leases outside reserves. The legislation recently passed ensures that they have explicit rights to hunt and forage over reserved land.

## Production

*See also* the chapters dealing with particular subjects.

### Land tenure

Nearly 60 per cent of the total area of land in the Territory is held under various forms of lease or licence which are described in Year Book No. 48, pages 111–12. The remainder comprises unoccupied and unreserved areas (21.4 per cent), reserved (18.7 per cent) and freehold (0.1 per cent). The following changes should be noted.

*Leases to Mission Organisations* are now granted under the *Special Purpose Leases Ordinance* 1953–1965 for fixed terms or in perpetuity.

*Miscellaneous Leases* are now granted in perpetuity for purposes such as a market garden, plantation, orchard, vineyard, poultry farm, piggery, or the like.

*Darwin Town Area Leases* are granted in perpetuity for business or residential purposes, or both, in the Darwin Town Area.

*Pastoral Homestead Leases*—provisions relating to the granting of these leases have been repealed.

*Agricultural Leases* are granted in perpetuity; the farm classifications no longer apply and the maximum area which now may be included in any one agricultural lease is fifty thousand acres and a person cannot hold agricultural land in excess of one hundred thousand acres except that these figures may be increased to 100,000 acres and 200,000 acres respectively by the Administrator on the recommendation of the Land Board.

*Special Purposes Leases* are now granted for a term of years or in perpetuity.

*Leases to Aborigines*—*See* page 958. Legislation providing for new land tenure arrangements in Darwin and Alice Springs commenced during 1971. Under these arrangements land rent has in effect been abolished and a reserve price scheme introduced for new leases. The reserve price scheme enables the Commonwealth to recover development costs. Lessees may now, after compliance with lease covenants, convert to freehold on payment of an administrative fee.



The chapter Rural Industry of this issue contains statistical information concerning areas occupied under various forms of tenure.

### Agriculture

Commercial agricultural production is confined to grain sorghum, vegetables and small-scale fruit production for local consumption. Townsville stylo seed production has increased considerably and has become an important contributor to the income of many small landholders.

Information concerning scientific surveys (commenced 1946), conducted by the Commonwealth Scientific and Industrial Research Organization to determine more accurately the potentialities of the Northern Territory is given in Year Book No. 51, page 101, and in earlier issues.

Increasing private investment in rural development is leading to greater pressures upon the Government for extension services and research. The work of C.S.I.R.O. and the Northern Territory Administration research stations and experimental farms is providing the basis for continuing rural development. As new knowledge is being gathered it will be followed by testing on farm scale. The research institutions in existence in the Northern Territory are as follows.

*Arid Zone Research Institute* (Alice Springs). With the completion of the new research laboratory in 1967 more emphasis is being placed on arid zone research in the 'Centre' and the need to conserve valuable pastoral lands while achieving maximum productivity.

*Beatrice Hill Animal Husbandry Research Station*. Considerable attention is being paid to the development of improved pasture systems, including establishment, maintenance and the reaction to various grazing rates. Breeding trials are being conducted with Santa Gertrudis, Brahman and cross-breeds. Banteng cattle are also being tested as a suitable source of tropical blood for breeding cattle adaptable to Territory conditions and a small herd of cross-bred cattle has now been developed. Some advance has been made on the domestication of buffaloes.

*Victoria River Experiment Station*. At this cattle breeding centre, work is being undertaken on genetic improvement of the local breed of Shorthorn cattle.

*Upper-Adelaide River Experiment Station*. The main investigations have been in the utilisation of improved and native pastures by cattle, and in rice production.

*Berrimah Experiment Farm*. The work of this farm has been restricted mainly to pasture and fodder crop investigations and fruit, vegetables and cashew nut trials.

*Katherine Experiment Farm*. This farm was established mainly to test the most promising results achieved by the C.S.I.R.O. and other investigations, particularly in relation to the development of the Tipperary area. These have included utilisation of Townsville stylo, pasture improvement and sorghum.

*Coastal Plains Research Station*. The work on this station is mainly on rice but has included pasture improvement, particularly in relation to suitable legumes.

*Douglas River Trial Area*. Investigations have included cotton, grain sorghum, bulrush millet, pastures and soya beans. An experiment to evaluate sabi grass/Townsville stylo pasture under grazing is being carried out.

*Forster Block*. Experimental work has been mainly in relation to pastures and fodder crops.



**NORTHERN TERRITORY: AREA AND PRODUCTION OF CROPS**  
1966-67 TO 1970-71

<i>Crop</i>	1966-67	1967-68	1968-69	1969-70	1970-71
<b>AREA(a)</b> (acres)					
Fruit—Bananas . . . . .	29	(b)	(b)	(b)	(b)
Pineapples . . . . .	17	(b)	(b)	(b)	(b)
Other . . . . .	87	98	90	71	120
<i>Total fruit</i> . . . . .	133	98	90	71	120
Peanuts . . . . .	(b)	12	(b)	(b)	58
Sorghum for grain . . . . .	527	(c)	(c)	(c)	3,234
Vegetables for human consumption . . . . .	218	199	255	277	253
Other crops(d) . . . . .	2,747	5,691	6,834	8,171	10,328
<b>Grand total(a)</b> . . . . .	<b>3,625</b>	<b>6,000</b>	<b>7,179</b>	<b>8,519</b>	<b>13,993</b>

**PRODUCTION**

Fruit—Bananas . . . . .	bushels	1,684	(e)	(e)	(e)	(e)
Pineapples . . . . .	"	997	(e)	(e)	(e)	(e)
Peanuts . . . . .	cwt	(e)	32	(e)	(e)	295
Sorghum (grain) . . . . .	bushels	7,533	(e)	(e)	(e)	56,000

(a) Excludes rice; details are not available for publication. (b) Not available for publication, included in Other crops. (c) Not available for publication, excluded from totals. (d) Principally fodder crops. (e) Not available for publication.

### Pastoral Industry

The pastoral possibilities of certain parts of the Territory were recognised at an early date, and both cattle and sheep raising have been attempted. For various reasons sheep-raising has not been very successful, but the cattle industry has progressed steadily and is continuing to expand. There is substantial potential for further expansion in the higher rainfall area of the Territory through the introduction of improved pastures and the use of superphosphate.

**NORTHERN TERRITORY: LIVESTOCK, 1967 TO 1971**

('000)

<i>30 June—</i>	<i>Horses</i>	<i>Cattle</i>	<i>Sheep</i>	<i>Pigs</i>
1967 . . . . .	38	1,097	8	3
1968 . . . . .	38	1,130	9	2
1969 . . . . .	39	(a)1,190	10	(a)2
1970(a) . . . . .	41	1,179	8	4
1971(a) . . . . .	41	1,145	9	3

(a) At 31 March.

### Mining

The mining industry is the major contributor to the income of the Northern Territory. Mineral output was valued at \$39 million in 1970-71 and at \$24 million in the first half of 1971-72. The main minerals being produced are bauxite, manganese, iron ore, copper, gold, and bismuth and the main centres of production are Gove, Groote Eylandt, Frances Creek and Tennant Creek. Exploration for new ore bodies continues at a high level.

A bauxite mining and treatment project based on extensive bauxite deposits has been developed at Gove at a cost of about \$310 million. Under an agreement with the Commonwealth, ratified by a special Ordinance in 1968, Nabalco Pty Ltd undertook to develop the deposits. A supplementary

agreement signed in 1969 set the minimum Australian equity in the project at 30 per cent. A joint venture now operates the project in which the respective rights are held, 70 per cent by Swiss Aluminium Australia Pty Ltd and 30 per cent by Gove Alumina Limited (a consortium of seven Australian companies). The first stage of an alumina plant to process the bauxite was opened on 1 July 1972. The capacity of the plant will be expanded from 500,000 tons to 1 million tons per annum by July 1973. The agreement also provides that Gove Alumina Limited can export a total of 40 million tons of untreated bauxite over 20 years and exports commenced in June 1971.

Manganese ore is being produced from extensive deposits at Groote Eylandt in the Gulf of Carpentaria. Production capacity has been increased since the commencement of operations in 1966 and should reach about 1.6 million tons per annum of lump ore and by-products by late 1972 or early 1973. Groote Eylandt supplies all Australia's requirements of metallurgical grade manganese ore and large tonnages are exported to Japan, Europe and the U.S.A. Total shipments of ore in 1970-71 amounted to 736,633 tons valued at about \$13.6 million.

Frances Creek is the only iron ore mine in the Territory following the closure of the Mt Bunday mine in December 1971. All iron ore produced is exported through Darwin to Japan. Total iron ore shipments in 1970-71 were 1,234,977 tons valued at about \$9.3 million.

Most of the copper, gold and bismuth produced in the Territory is obtained from the underground mines of Peko Wallsend Ltd, at Tennant Creek. Production from these mines in 1970-71 was 5,615 tons of copper, 88,342 ounces of gold, 78,673 ounces of silver and 206 tons of bismuth, valued at about \$11.3 million. Three mines are currently in production and a major expansion programme costing \$39 million is underway. A new mine, Warrego, commenced operation in July 1972 and the Gecko mine is expected to open early in 1974. A flash smelter is due to be commissioned early in 1973.

Large deposits of uranium ore have been discovered in the Alligator Rivers region, about 150 miles east of Darwin. The most important discoveries so far are Ranger 1, Nabarlek and Koongarra and the companies are negotiating individually with the Commonwealth for the development of the deposits, with special emphasis on protection of the environment. The Commonwealth is examining the feasibility of a regional centre to serve the mining industry as well as the forestry, pastoral and tourist industries in the region. The Alligator Rivers region is considered to be a uranium province of world importance and there are good prospects for the discovery of further deposits of commercial significance.

Investigations are continuing into possible methods of treating the extensive lead/zinc deposits located in the McArthur River district. Conventional metallurgical processes are not considered suitable for the treatment of these ores. Other mineral deposits of possible economic significance exist in the Rum Jungle, Jinka Plains and Jervois Range areas of the Northern Territory.

The following table shows preliminary results of the Mining Censuses taken in respect of the years ended 30 June 1969 and 1970.

#### NORTHERN TERRITORY: MINING ESTABLISHMENTS 1968-69 AND 1969-70

NOTE. Direct comparisons with figures for previous years are not possible because of changes in the census units, the scope of the census and the items of data. For details see Chapter 26, Mineral Industry.

	1968-69	1969-70
Establishments operating during year . . . . .	No. 20	26
Persons employed(a) . . . . .	No. 1,160	1,446
Wages and salaries . . . . .	\$m 6.6	8.0
Turnover . . . . .	\$m 36.3	38.2
Opening stocks at 30 June . . . . .	\$m 4.4	4.7
Closing stocks at 30 June . . . . .	\$m 5.1	5.2
Purchases, transfers in and selected expenses . . . . .	\$m 14.8	13.2
Value added(b) . . . . .	\$m 22.2	25.9

(a) At end of June. Includes working proprietors. (b) Sales, transfers out and other operating revenue plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.

*Petroleum and natural gas.* Offshore operations again represented the main activity in petroleum exploration with 6 wells being drilled in Territory waters during 1971-72. In June 1972, three new offshore petroleum permits in the Arafura Sea and the Gulf of Carpentaria were offered to companies and this will increase the already substantial activity in offshore exploration.

Drilling of the Petrel structure in the Bonaparte Gulf during 1969 resulted in a promising discovery of gas. Further exploration to date has not however revealed the presence of gas in commercial quantity.

On-shore evaluations of the Mereenie oil and gas field have indicated reserves of 300 million barrels of oil and up to 1 U.S. trillion cubic feet of gas. The recovery of the oil presents some difficulties but the feasibility of establishing a small refinery at Alice Springs is being examined by the exploration companies and the Government.

A substantial natural gas reservoir at Palm Valley about 70 miles west of Alice Springs has been known to exist since the mid-sixties. An agreement covering proposals for the export of the gas to California was announced in June 1972. The proposals, which are subject to the Governments' approval, and to the proving of gas reserves of about 7 U.S. trillion cubic feet, involve the construction of a large diameter pipeline either to the Gulf of Carpentaria or to the Cooper Basin for connection to the proposed Cooper Basin—Sydney pipeline, the building of a liquefaction plant, establishment of port facilities and a township (if shipping through the Gulf of Carpentaria), the construction of large tankers to carry the liquefied gas and further facilities at the American end. It is estimated that these proposals will cost about \$900 million.

### Forestry

A programme of forest improvement and development to conserve existing forest areas and increase timber resources is undertaken by the Forestry Branch of the Northern Territory Administration and aims to eventually reduce the Territory's dependence on imported timber. Basic forestry research is carried out by the Forestry and Timber Bureau at a Regional Research Station established at Berrimah. The Territory forestry programme includes the regeneration and utilisation of native forests, the establishment of 1,000 acres of softwood plantations (mainly native cypress pine) per year and makes provision for the employment and training of Aborigines in forestry work. Local production of log timber, mainly cypress pine, amounted to 819,000 super feet in 1970–71 but this was insufficient to meet local needs and some 4,714,000 super feet of sawn timber was imported from interstate and overseas.

### Fisheries

Following preliminary surveys indicating the existence of valuable prawn resources off the Northern Territory coast, prawning operations by a number of companies were approved for waters adjacent to the Northern Territory. All companies were required to establish shore processing plants following an initial survey period. Three of these companies are now operating. Two are joint Australian—Japanese ventures which have been permitted to use foreign vessels and crews for limited periods and which have been required to establish processing plants in Darwin. The third company is operating a shore processing plant at Groote Eylandt. For a limited establishment period this company has been given protection against the establishment of other processing plants in that area although this protective arrangement would not preclude Aborigines from undertaking their own prawn fishing and processing on Aboriginal reserves should they wish to do so. During 1971, Territory based prawn ventures exported prawns valued at \$4.2 million, the bulk of which went to Japan.

The other main fishery in the Territory is an inland fishery based on barramundi which produced more than 138 tons live weight of fish during 1970–71. A small cultured pearl industry has also been established.

### NORTHERN TERRITORY: FISHING(a) 1966-67 TO 1970-71

		1966-67	1967-68	1968-69	1969-70	1970-71
Prawning—						
Estimated gross weight of prawn catch . . . . .	'000 lb	1	23	2,375	8,682	9,905
Gross value of prawns . . . . .	\$'000	1	14	831	3,646	4,160
Other fisheries—						
Estimated landed weight of fish catch . . . . .	'000 lb	550	555	533	253	398
Gross value of fish . . . . .	\$'000	73	92	96	51	80
All fisheries—						
Number of boats engaged . . . . .		60	53	110	82	127
Number of men employed . . . . .		133	123	573	437	542

(a) Excluding pearl shell fisheries and pearling.

### Secondary industries

The secondary industries that have so far been established in the Territory have been largely the service industries normally associated with a developing area, such as electrical repairs, printing, motor and marine engineering, plumbing, welding, joinery, sheet metal work, and blue metal crushing. Industrial investments by private interests in recent years include plants to manufacture bitumen, clay bricks, concrete bricks, reinforcing steel, concrete products and fencing materials.

The following table shows preliminary results of the Manufacturing Censuses taken in respect of the years ended 1969 and 1970.

#### NORTHERN TERRITORY: MANUFACTURING ESTABLISHMENTS, 1968-69 AND 1969-70

NOTE. Direct comparisons with figures for previous years are not possible because of changes in the census units, the scope of the census and the items of data. For details see Chapter 21 Manufacturing Industry.

		1968-69	1969-70
Establishments operating during year . . . . .	No.	73	69
Persons employed(a) . . . . .	No.	1,012	1,101
Wages and salaries . . . . .	\$m	3.6	3.9
Turnover . . . . .	\$m	20.4	19.3
Opening stocks at 30 June . . . . .	\$m	1.8	1.9
Closing stocks 30 June . . . . .	\$m	2.2	2.8
Purchases, transfers in and selected expenses . . . . .	\$m	11.4	12.1
Value added(b) . . . . .	\$m	9.5	8.2

(a) At end of June. Includes working proprietors. (b) Sales, transfers out and other operating revenue plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.

### Tourism

Tourism has become one of the Territory's major industries in recent years. There were about 80,000 visitors to the Northern Territory in 1969-70. The industry is estimated to be worth over \$20 million a year and is expanding at a rate around 14 per cent per annum.

A firm of consultants has reported on the tourism potential of Central Australia, and in particular the Ayers Rock-Mount Olga National Park. Their findings have been published in the reports *Tourism Plan for Central Australia* and *Ayers Rock-Mount Olga National Park Development Plan*. The reports are being evaluated and further investigations are being undertaken to assist the Government's consideration of tourism development proposals for the Centre.

### National Parks and Reserves

Large areas in the Territory have been set aside as wildlife sanctuaries under the provisions of the Wildlife Conservation and Control Ordinance. They cover about 18,000 square miles and are controlled by the Chief Inspector of Wildlife in the Northern Territory Administration. A further 92,704 square miles of Aboriginal reserves are also wildlife protected areas.

There are some thirty-nine national parks and reserves totalling about 946 square miles which are administered by the Northern Territory Reserves Board. The Board is responsible for the care, control and management of these reserves, and its functions include preservation and protection of natural and historical features, and the encouragement of public use and enjoyment of land set aside in such reserves.

## Trade, transport and communication

### Trade

No comprehensive record is kept of the trade between the States and the Territory. The following table shows the values of the principal commodities imported into and exported from the Northern Territory from or to overseas countries during the years 1966-67 to 1970-71.



**NORTHERN TERRITORY: PRINCIPAL OVERSEAS  
IMPORTS AND EXPORTS, 1966-67 TO 1970-71**  
(**\$'000**)

Commodity	1966-67	1967-68	1968-69	1969-70	1970-71
<b>IMPORTS</b>					
Petroleum and shale spirit—					
Aviation kerosene . . . . .	615	1,099	1,513	1,093	1,119
Automotive spirit . . . . .	542	587	577	706	1,051
Automotive distillate . . . . .	387	324	589	1,103	930
Furnace fuel . . . . .	393	473	659	567	837
Other(a) . . . . .	390	531	743	1,077	1,226
Timber . . . . .	183	206	380	548	324
Portland cement . . . . .	311	370	650	741	985
Iron and steel manufactures . . . . .	3	1,195	893	1,172	833
Machinery and transport equipment(b) . . . . .	3,914	2,376	12,757	23,534	11,464
Other articles . . . . .	648	2,246	3,039	9,288	4,901
<b>Total imports . . . . .</b>	<b>7,386</b>	<b>9,407</b>	<b>21,800</b>	<b>39,829</b>	<b>23,670</b>
<b>EXPORTS(c)</b>					
Meats . . . . .	3,422	4,864	4,806	4,807	5,002
Fresh prawns and shrimps . . . . .	..	..	605	4,897	5,627
Hides and skins, raw . . . . .	227	135	209	269	183
Iron ore . . . . .	..	3,053	6,467	9,124	7,094
Manganese ore . . . . .	2,682	4,474	8,243	8,329	10,202
Other ores and concentrates . . . . .	13	959	287	762	737
Other articles . . . . .	2,624	4,370	8,317	21,537	7,614
<b>Total exports . . . . .</b>	<b>8,968</b>	<b>17,855</b>	<b>28,934</b>	<b>49,725</b>	<b>36,459</b>

(a) Includes industrial and marine diesel fuel, oil for use as refinery stock, etc. (b) Includes value of oil search equipment (floating structures, etc.) which were brought to the Northern Territory for temporary operation and moved overseas after the planned exploration activities were completed. (c) Includes domestic exports and re-exports.

### Shipping

Shipping services to Darwin are provided from the eastern States by the Australian National Line and from the west by the Western Australian State Shipping Service. Increasing numbers of oil tankers and overseas general cargo vessels visit Darwin while iron ore carriers continue to load lump and fine ore for Japan. The prawning and fishing industry accounts for approximately one-third of the shipping entries into the port and activity is increasing as a result of visits by oil rig tenders.

John Burke Pty Ltd operates a subsidised shipping service from Brisbane to the Gulf of Carpentaria ports and serves Aboriginal missions and settlements as well as the mining centres of Gove and Groote Eylandt. Gove is also served by Australian Territory Liner Services. Other shipping services to Groote Eylandt and Gove are in connection with the export of the mining production.

Mission and privately owned boats and barges also provide services from Darwin to Aboriginal communities and ports along the coast.

In 1970 the Australian National Line replaced its vessels calling at Darwin with a new container/bulk ore vessel, the *Darwin Trader*, which carries general cargo to Darwin and backloads manganese ore from Groote Eylandt to Tasmania.

In 1971 the Western Australian State Shipping Service introduced two unit-load vessels and expects to introduce a further two unit-load vessels; these vessels will replace all the conventional cargo and passenger/cargo vessels previously in use. In early 1972, the Commonwealth Government offered the Western Australian Government a capital grant of \$2.5 million to assist in the purchase of the fourth unit-load vessel. The significant improvement in port operations as a result of the introduction of these vessels has been one of several factors which has led to a review of the previously approved proposals for the development of the port of Darwin.

### Air services

At 30 June 1971 there were 125 aerodromes in the Territory, nine of which are maintained by the Commonwealth Department of Civil Aviation. The overseas passenger services using the Darwin international airport are Lufthansa (Sydney to Frankfurt); Qantas/B.O.A.C. (Sydney to London); B.O.A.C. (Sydney to Hong Kong); Union de Transports Aeriens (Paris to Los Angeles via Noumea); and T.A.A. on behalf of Transportes Aereos de Timor (Darwin to Baucau). Regular internal services to Darwin, with, in some cases, intermediate stops at Territory centres, are operated by Trans-Australia Airlines and Ansett Airlines (from Adelaide, Melbourne, Sydney and Brisbane), and MacRobertson-Miller Airways Ltd (from Perth and Derby), MacRobertson-Miller Airways Ltd and Connellan Airways Ltd operate a network of air services throughout the Territory, the latter company's base being at Alice Springs. The Royal Flying Doctor Service also operates aircraft, while charter services can be secured at Darwin and Alice Springs.

### Railways

The Commonwealth Railways Commissioner operates the Central Australia Railway from Port Augusta in South Australia to Alice Springs over a distance of 822 miles, of which about 200 are in the Northern Territory. The line is standard gauge from Port Augusta to Marree, a distance of 217 miles, and 3 ft 6 in gauge from Marree to Alice Springs. The Commonwealth Government has approved in principle the construction of standard gauge line between Tarcoola and Alice Springs to replace the Marree-Alice Springs section of the Central Australia Railway and survey work has commenced. The Commissioner also operates the North Australia Railway between Darwin and Birdum on a 3 ft 6 in gauge over a distance of 317 miles. The two inland terminals, Alice Springs and Birdum are about 630 miles apart and are connected by road transport along the Stuart Highway. Larrimah, on the highway and 6 miles north of Birdum, is the point of trans-shipment for passengers and goods and is, at present, the effective terminal. A road-rail freight service operates between Adelaide and Darwin via Alice Springs.

### Roads

The Stuart Highway, 954 miles long, connects Alice Springs with Darwin and runs via Katherine and Tennant Creek. The Barkly Highway, 403 miles long, connects Mount Isa (Queensland) with Tennant Creek and joins the Stuart Highway some 16 miles north of Tennant Creek. These highways are used for carrying various freights, including cattle, particularly to and from the railheads at Alice Springs, Larrimah and Mount Isa. The routes are used also for overland tourists and travellers from the southern States to Darwin. The Government has approved a three-year programme of improvement and maintenance of these highways at a cost of \$16 million. The work involves the construction of 12 bridges, 9 large culverts, the re-alignment of 55 miles of road associated with bridge work, the strengthening of 218 miles of road and resealing of 237 miles of the existing pavements. An amount of \$3 million was appropriated for this work in 1971-72. There are now approximately 11,300 miles of roads in the Territory of which 2,584 miles are sealed.

Work on a programme for reconstruction and development of beef cattle roads was commenced in 1961-62. To June 1971 \$32.2 million has been authorised for the improvement of 1,600 miles including the sealing of 950 miles. Expenditure to 30 June 1971 was \$27.9 million. The transport of cattle by road is expected to increase the number, quality and value of cattle turned off.

The Government has approved the sealing of a 90 mile section of the road between Alice Springs and Erldunda at a cost of \$3.4 million. It has also approved the sealing of 86 miles of new road to serve the Alligator Rivers region east of Darwin at a cost of \$4.6 million.

### Posts, telegraph, telephones and wireless

Postal communication is maintained by road, rail and air transport between Darwin and the capital cities of Australia. In addition, vessels belonging to the Western Australian State Shipping Service provide a regular service between Fremantle and Darwin. Inland, the northern part of the Territory receives its mail via Darwin or by means of the aerial services, and the southern districts are served via Adelaide.

The overland telegraph line, covering 2,230 miles runs from Adelaide to Darwin and links Darwin in telegraphic communication with other parts of the world. Trunk telephone lines extend from Adelaide and Townsville to Darwin, providing telephone communication with the capital cities of Australia. These lines also carry interstate telegram and telex traffic and serve the towns along the routes.

Darwin is connected by high frequency radio to Gove Peninsula and to Groote Eylandt. In addition high frequency radio telephone exchanges have been established at Alice Springs and Katherine which provide connections to the telephone network for pastoral, mining, tourist and other organisations throughout the Northern Territory and across the borders into Queensland, South Australia and Western Australia. The majority of homesteads on pastoral leases are equipped with radio transceivers operated under licence from the Postmaster-General's Department.

Regional national broadcasting stations are situated at Darwin, Alice Springs, Tennant Creek and Katherine, and there are two commercial stations situated at Darwin and Alice Springs respectively. Two television stations, ABD Channel 6 of the national broadcasting system and NTD Channel 8, a commercial station, commenced operations in the second half of 1971.

## Education

*See also the chapter Education, Cultural Activities and Research.*

### Community schools

Since February 1968 the Commonwealth Minister for Education and Science has been responsible for community education in the Northern Territory. Community schools are operated by the Commonwealth under an agreement with the South Australian Department of Education which has until recently provided all teachers and curricula.

In July 1970 the South Australian Education Department announced that it had decided upon a planned withdrawal of South Australian teachers from the Northern Territory over a five year period. As a result of this withdrawal seventy teachers of the total 534 teachers employed, formed the nucleus of the first Commonwealth Teaching Service. At 29 February 1972, there were 34 Government primary, infant and secondary schools in the Territory, 2 special schools for mentally and physically handicapped children and 2 schools of the air serving students in outback areas.

The total enrolment at 29 February 1972 was 11,564 pupils. At 1 August 1972 a total of 590 teachers, 200 through the Commonwealth Teaching Service, served in the Northern Territory Government Community schools. Instruction, in general, is according to the South Australian curriculum with modifications to suit Territory conditions.

High schools have been established with classes to matriculation level at Darwin, Nightcliff and Alice Springs. Area schools provide classes up to fourth year high school level at Katherine, Tennant Creek and Nhulunbuy (fourth year by correspondence), and to third year high school level at Batchelor and Alyangula.

Special boarding-away-from-home allowances, correspondence supervision allowances and conveyance allowances are paid to school-age students in the Northern Territory. In addition, limited numbers of special Northern Territory secondary and tertiary scholarships supplement normal Commonwealth scholarship provisions. For details of these special allowances *see* Year Book No. 56, page 974.

At 1 August 1972 there were 24 government pre-school centres (including one play group) in the Territory, with an enrolment of 1,300 pupils.

### Theoretical training for apprentices

The recognition that technical school training is an extension of workshop training has led to the introduction of day-time classes which apprentices attend without loss of pay. Full trade courses are provided in the more popular trades in Darwin; correspondence courses are arranged for apprentices outside Darwin and for those in Darwin following the less popular trades.

## Finance

Details of receipts and expenditure of the Territory for the years 1966-67 to 1970-71 are shown in the table following. In this table the receipts and expenditure of the Northern Territory have been classified into a National Accounts form. The table covers transactions relating to the Northern Territory in the Commonwealth Consolidated Revenue Fund and the following trust funds: Aborigines Benefits, Northern Territory Government Settlements Canteens, Northern Territory Housing Commission, Northern Territory Housing Loans, Northern Territory Transport and Northern Territory expenditure from the Aboriginal Advancement Trust Account. Details of the financial

transactions of the following Northern Territory semi-government authorities are also included: the Northern Territory Port Authority and the Northern Territory Housing Commission (from 1969-70). Details of the financial transactions of the Darwin City Council are also incorporated in the table. Revenue derived by the Commonwealth from income taxes, customs duties, etc., levied in the Northern Territory and expenditure by the Commonwealth in the Northern Territory on such items as defence, civil aviation, railways, etc., and payments to residents from the National Welfare Fund are not included.

**NORTHERN TERRITORY: RECEIPTS AND EXPENDITURE, 1966-67 TO 1970-71**  
(\$'000)

	1966-67	1967-68	1968-69	1969-70	1970-71
<b>RECEIPTS</b>					
Taxation—					
Stamp duties . . . . .	55	73	86	94	177
Motor registration . . . . .	273	321	517	586	647
Other taxes, fees, fines, etc. . . . .	521	589	696	840	1,434
Interest, rent, etc. . . . .	538	919	1,058	1,581	1,338
Public enterprises income . . . . .	1,789	2,209	2,468	3,059	5,509
Net sale of local authority and public corporation securities . . . . .	—3	—393	90	92	—16
Other receipts(a) . . . . .	256	450	425	—52	—559
Net charge to Commonwealth budget . . . . .	50,722	53,291	57,964	74,820	90,103
<b>Total receipts . . . . .</b>	<b>54,151</b>	<b>57,459</b>	<b>63,304</b>	<b>81,020</b>	<b>98,634</b>
<b>EXPENDITURE</b>					
Net current expenditure on goods and services—					
Law, order and public safety . . . . .	328	426	490	422	861
Education . . . . .	1,763	3,387	4,562	5,609	7,853
Public health and welfare . . . . .	7,627	8,859	12,542	16,630	16,171
Other . . . . .	12,677	13,984	13,975	15,511	20,554
Net capital expenditure on new assets and stocks—					
Roads . . . . .	4,756	7,243	8,099	8,621	12,002
Housing . . . . .	4,443	3,654	3,414	7,120	7,626
Other . . . . .	20,416	17,002	16,963	22,819	25,851
Net purchase of existing assets(b) . . . . .	264	—878	—358	—591	2,784
Interest paid . . . . .	145	174	113	146	267
Cash benefits . . . . .	316	369	450	498	592
Subsidies . . . . .	298	311	337	648	473
Net advances—					
Housing . . . . .	567	2,191	1,956	2,886	1,625
Other . . . . .	544	602	513	441	1,475
Grants towards private capital expenditure . . . . .	7	135	248	260	501
<b>Total expenditure . . . . .</b>	<b>54,151</b>	<b>57,459</b>	<b>63,304</b>	<b>81,020</b>	<b>98,634</b>

(a) Includes movements in cash, investments, etc. (b) Minus sign (—) denotes excess of receipts (from sales) over expenditure on, or purchases of, existing assets, including housing.



## THE AUSTRALIAN CAPITAL TERRITORY

### General description

The Commonwealth Constitution provides that the Seat of Government of the Commonwealth shall be in the State of New South Wales but distant not less than 100 miles from Sydney. After a number of alternative sites were considered, an area of 911 square miles lying approximately 200 miles south-west of Sydney was transferred to the Commonwealth as from 1 January 1911. A further 28 square miles at Jervis Bay were transferred as from 4 September 1915 to serve as a port for the Territory.

The primary responsibility for administering the Australian Capital Territory lies with the Department of the Interior, whose functions include housing, police, and municipal services. Education, public health, justice and the provision of basic physical services, including water supply, sewerage and roads, are the responsibility of the Departments of Education and Science, Health, Attorney-General's, and Works. The National Capital Development Commission has the responsibility for the planning and development of the Canberra city area.

The Australian Capital Territory Advisory Council was established in 1930. It has eight elected members and a representative from each of the Departments of Interior, Works, and Health, and the National Capital Development Commission, as well as an observer from the Department of Education and Science. The Council advises the Minister for the Interior on matters affecting the Australian Capital Territory. Ordinances are submitted in draft form to the Council for advice and comment before being implemented.

At the census of 30 June 1971 the population of the Australian Capital Territory was 144,063, made up of 140,864 in the urban Canberra (excluding Queanbeyan) area and 3,199 in rural areas (including Jervis Bay). The estimated population of the Territory at 31 December 1971 was 77,100 males and 73,500 females, 150,600 persons. *See also* the chapters Population and Vital Statistics.

### National Capital Development Commission

The *National Capital Development Commission Act 1957-1960* provides for a Commission to undertake and carry out the planning, development and construction of the City of Canberra as the National Capital of the Commonwealth. The year 1970-71 was the thirteenth year of the Commission's operations. Construction work was carried out by means of agency arrangements with the Commonwealth Department of Works and private consultants. Details of the expenditure by the Commission in each year from 1966-67 to 1970-71 are included in the table on page 794.

Total expenditure in 1970-71 was \$55.8 million comprising: land development and services \$10.5 million; water, sewerage and stormwater services and headworks \$2.5 million; housing, flats and other accommodation \$7.6 million; educational facilities \$4.9 million; roads, bridges and traffic control \$6.8 million; city works and associated facilities \$4.6 million; Commonwealth offices \$13.6 million; national works \$0.9 million; others \$4.4 million.

The following major works were completed during the 1970-71 financial year by the Commission: Belconnen High School; Higgins, Weston and Waramanga Primary Schools; extensions to the Australian War Memorial; Scarborough House at Phillip; Russell Offices—Buildings Nos 11 and 14; C.S.I.R.O. Headquarters Building; Phillip Police Station; Fyshwick Retail Fruit and Vegetable Market; Yarralumla and Long Gully Creek stormwater channel; Fyshwick sewerage, filter and humus tanks; Belconnen Reservoir No. 3; Weston Creek Reservoirs Nos 8 and 10; Barton Highway re-construction; Commonwealth Avenue/Parkes Way Interchange; Page/Latham—construction of Southern Cross Drive and Kingsford Smith Drive.

Works under construction at the beginning of the 1971-72 financial year included the following projects: Weston Creek High School; Fisher, Rivett and Latham Primary Schools; Parliament House extensions; Campbell Park Offices; Cameron Offices; Russell Offices—Building No. 10; Juliana House at Phillip; Weston Creek Reservoirs Nos 7 and 9; Capital Hill Ring Road; Yarra Glen Roundabout; Construction of roads and services in Belconnen Town Centre; Phillip Swimming Centre; Lake Ecology Laboratory at Kingston; Pavilion at Phillip Enclosed Oval; Weston Park development.

## Works and services

### Housing

Until the period following the 1939–45 War most houses and flats in the Australian Capital Territory were built and rented by the Department of the Interior. More recently, an increasing number of houses and flats have been built by private enterprise, and as a result the proportion of houses and flats in the Australian Capital Territory occupied by tenants of the Department of the Interior has fallen from 79.7 per cent of total occupied houses and flats in 1954 to 58.3 per cent in 1961 and 38.8 per cent in 1966. Although the bulk of rented accommodation is provided by public authorities and will continue thus in the foreseeable future, there has been a considerable increase in the proportion of home ownership in the Australian Capital Territory, since 1954. The proportion of houses and flats owned or being purchased by instalments has risen from 19.5 per cent in 1954 to 29.0 per cent in 1961 and 45.6 per cent in 1966. In June 1966, 38.6 per cent of the total occupied private dwellings in the Canberra City District were owned by the Department of the Interior, and in June 1969, 33.3 per cent. Home building activity in the Woden Valley and Weston Creek, south-west of the former city area and Belconnen, north-west of the former city area, has continued to expand, and at June 1969 there were 7,396 occupied private dwellings in the Woden Valley and Weston Creek area, and 2,264 occupied private dwellings in the Belconnen area. *See also* the chapter Housing and Building.

### Municipal services

Canberra has been developed as a garden city. More than eleven million trees and many acres of lawns have been planted since 1927. The development of new areas of parkland and the maintenance of existing tree and lawn areas is the responsibility of the City Parks Administration of the Department of the Interior. Municipal services are also provided by the Department of the Interior.

At 30 June 1971, 37,400 meters were connected to the city water supply, drawn through twenty-two service reservoirs from three storages on the Cotter River with a total capacity of nearly 20,000 million gallons. In 1970–71 some 6,300 million gallons of water were consumed in Canberra, and in addition the system supplied 420 million gallons to Queanbeyan, New South Wales. Treatment works at Weston Creek, Belconnen and Fyshwick dispose of Canberra's sewage. At 30 June 1970, 725 miles of sewers, 9 miles of rising sewerage mains and 736 miles of storm water drains were laid.

### Department of Works

Apart from the work it carries out for the National Capital Development Commission, the Department of Works acts as design and supervision agent for other Commonwealth departments and instrumentalities. Total expenditure during 1970–71 on all operations amounted to \$16.8 million (\$11.9 million in 1969–70), comprising: building works—housing \$97,562, other building \$8,654,538; engineering works \$1,670,569, repairs and maintenance—buildings \$2,640,483, engineering \$3,597,536, and purchase of plant \$160,115.

## Production

*See also* the chapters dealing with particular subjects.

### Lands

Reference has been made in earlier issues of the Year Book to the general conditions of land tenure in the Territory and to the area of alienated and leased land, and the chapter Rural Industry of this issue contains statistical information on the subject. (*See also* § 1. Canberra: Fifty Years of Development, page 123 of Year Book No. 49.)

Under the *Seat of Government (Administration) Act* 1910–1965, no Crown lands in the Territory may be sold or disposed of for any estate in freehold except in pursuance of some contract entered into before the commencement of the Act. In general, leases of land in the city area are granted under the *City Area Leases Ordinance* 1936–1971. In special circumstances land may be leased for purposes other than business or residential under the *Leases (Special Purposes) Ordinance* 1925–1970 and for church purposes under the *Church Lands Leases Ordinance* 1924–1966. As considerable areas of Commonwealth owned land in the Territory are not immediately required in connection with the establishment of the City, they have been leased for agricultural or grazing purposes for terms consistent with the anticipated growth of Canberra under the *Leases Ordinance* 1918–1966. Some lands in the Territory, in areas generally remote from the City, remain in private ownership under freehold title.

The Commonwealth Territory at Jervis Bay, comprising about 28 square miles, was acquired from New South Wales for the possible provision of port facilities in connection with the Australian Capital Territory. A portion of the area is occupied by the Royal Australian Naval College (H.M.A.S.

*Creswell*) and a Royal Australian Navy airfield. Several blocks fronting Sussex Inlet have been leased for guest houses and holiday camps, etc., under the *Leases Ordinance* 1918-1966, and an area of land in the Murray's Beach area has been set aside for possible use as an atomic power station under the control of the Australian Atomic Energy Commission. Apart from picnic and camping areas, experimental planting, afforestation and soil conservation activities, the remainder of the area is being maintained in its natural state.

### Forestry

Forestry operations in the Australian Capital Territory began in 1915 when the denuded slopes of Mount Stromlo were planted with pines to arrest soil erosion and improve the visual quality of the landscape. In 1926 a comprehensive review was made of the Territory's potential for forest development and a programme for the development of commercial forests was approved. Major reviews of the programme were made in 1932, 1954 and 1964 without substantially changing the basic policy of systematic conservation and development. Most of the better native forest has since been placed under management, and forestry operations including fire-control have been extended to 100,000 acres of eucalypt forest in the Cotter Catchment and adjacent forested areas. In these areas the better stands were harvested extensively to provide timber for Canberra's post-war expansion, and were subsequently treated to promote regeneration and to protect the quality of water harvested. Currently, hardwood logging is restricted to incidental production from silvicultural operations.

The total area of softwood plantations within the Australian Capital Territory at 30 June 1972 was 30,581 acres, of which 28,348 acres were *Pinus radiata*, the balance consisting chiefly of *Pinus ponderosa* and *Pinus nigra*, plus 796 acres at Jervis Bay, mainly *Pinus radiata* and *Pinus elliotii*.

In 1971-72 there was no significant commercial production of hardwood timber from the Australian Capital Territory or Jervis Bay. However the volume of softwood cut increased to 2.21 million cubic feet (1.93 million in 1970-71). This yielded a stumpage of \$372,000, bringing the total net stumpage earnings from Australian Capital Territory plantations to date to \$2,485,000.

In 1972, Australia's first plantation-based integrated timber-converting complex commenced production. Shortly, structural plywood will be added to the production of sawn, kiln dried and dressed products and the production of chips. Consumption of logs by the complex is scheduled to reach 4.2 million cubic feet by 1975.

Over the last 5 years provision has been made for recreational use of both native and plantation forests. Public use continues to increase rapidly as better facilities are provided and the areas become better known.

### Agricultural, pastoral and secondary industries

During 1970-71 the production of the more important items of the agricultural and pastoral industry was: wheat 28,090 bushels; wool 2,205,000 lb; whole milk 773,000 gallons; meat (carcass weight), fresh 6,814 tons. The numbers of livestock depastured at 31 March 1971 were: horses 836; cattle 17,910; sheep 251,187; pigs 121.

As in the Northern Territory, the secondary industries established in the Australian Capital Territory are largely the service industries associated with the growth of the Territory.

The following table shows preliminary results of the Manufacturing Censuses taken in respect of the years ended 30 June 1969 and 1970.

#### AUSTRALIAN CAPITAL TERRITORY: MANUFACTURING ESTABLISHMENTS, 1968-69 AND 1969-70

NOTE. Direct comparisons with figures for previous years are not possible because of changes in the census units, the scope of the census and the items of data. For details see Chapter 21 Manufacturing Industry.

	1968-69	1969-70
Establishments operating during year . . . . .	No. 115	116
Persons employed(a) . . . . .	No. 2,745	3,072
Wages and salaries . . . . .	\$m 9.5	11.2
Turnover . . . . .	\$m 31.2	37.0
Opening stocks at 30 June . . . . .	\$m 3.3	3.7
Closing stocks at 30 June . . . . .	\$m 3.7	3.4
Purchases, transfers in and selected expenses . . . . .	\$m 16.9	19.4
Value added(b) . . . . .	\$m 14.8	17.2

(a) At end of June. Includes working proprietors. (b) Sales, transfers out and other operating revenue plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.



## Transport and communication

Canberra is connected with the railway system of New South Wales at Queanbeyan by a line 5 miles long. This line was opened for goods traffic on 25 May 1914 and for passenger traffic on 15 October 1923. Direct or linking services operate between Canberra and Sydney and Canberra and Melbourne. Two airlines provide many services daily each way on the Sydney-Canberra-Melbourne route. Regular motor-coach services link Canberra with towns in New South Wales, Victoria and South Australia. The total length of roads in the Territory at 30 June 1971 was: bitumen and concrete, 646 miles; gravel, 246 miles; other formed roads, 26 miles; total, 918 miles. There are three radio broadcasting stations in the Territory, 2CY and 2CN of the national broadcasting system and 2CA, a commercial station, and two television stations, ABC Channel 3 of the national broadcasting system and CTC Channel 7, a commercial station.

## Social

*See also* the chapter Education, Cultural Activities and Research.

### Education

The *Education Ordinance* 1937-1966 provides for the compulsory attendance at school of children between the ages of six and fifteen years. The Commonwealth Department of Education and Science is primarily responsible for the education of children in the Australian Capital Territory. By agreement, however, the New South Wales Department of Education arranges the teaching programme in accordance with its own curriculum and provides teaching staff. It is reimbursed for expenses incurred.

From the beginning of 1973 changes in this arrangement will occur. The Commonwealth Teaching Service will provide approximately 200 assistant teachers for Australian Capital Territory schools in 1973 and from the beginning of 1974 the Commonwealth will assume complete responsibility for education in the Australian Capital Territory and the involvement of the New South Wales Education Department will be phased out. An education authority will be set up to administer Australian Capital Territory education following an inquiry to be conducted by the Joint Parliamentary Committee on the Australian Capital Territory on the powers and responsibilities of the authority, the form it should take and the timing of its establishment.

At 4 August 1972, there were 12 government secondary schools in the Australian Capital Territory providing courses proceeding to the Higher School Certificate. Thirty-nine schools provided courses at infants and primary levels, three of these being in rural districts and one in the Jervis Bay area.

A school for physically handicapped children is located at Turner Infants School. Special units for deaf children are situated at Ainslie and Mawson Primary Schools and at Telopea Park High School. Classes for mildly intellectually handicapped children are provided at Ainslie, Mawson, Turner, Narrabundah, and Scullin Primary Schools, and at Narrabundah High School. Two special schools and one pre-school serve the needs of moderately intellectually handicapped children. Aphasic children are catered for in a special class at Forrest Primary School, and two reading centres operate at Downer and Hughes Primary Schools. Special English classes are available at five primary schools and five high schools. Educational guidance services are provided by the Education Clinic and through counselling staff.

The 54 pre-schools including 2 in the Jervis Bay area and a mobile unit which visits outlying areas of the Australian Capital Territory provide pre-school facilities for approximately 3,700 children between the ages of 3 and 5 years. It is anticipated that new pre-schools will be opened in 1973 at Duffy, Holt, Melba and Weetangera. A second unit will be provided at Farrer. Four new primary schools are planned for occupation early in 1973, these will be 'open plan' schools at Duffy and Weetangera and partial 'open plan' at Melba and Holt. No new secondary schools will open in 1973.

At 4 August 1972, there were 18,522 pupils enrolled in primary grades of government schools and 9,764 pupils in secondary forms of government schools.

At 4 August 1972, there were 25 non-government schools in Canberra including 7 secondary schools which provide courses leading to the Higher School Certificate. At the same date 6,345 pupils were enrolled in the primary grades of non-government schools and 4,247 pupils were enrolled in the secondary forms of non-government schools.



The Canberra Technical College, which follows generally the curriculum set by the New South Wales Department of Technical Education, provides trade, post-trade, certificate, and some hobby courses. In 1972 the Technical College provided instruction in 109 courses in 21 different schools of study. Student enrolments in June 1972 were 7,200.

The Canberra School of Music provides a diploma course and individual study in a range of instruments and voice. At 1 August 1972, enrolments totalled 720. A new school to accommodate between 1,000 and 1,200 students will be available during 1975.

For information about the Australian National University, refer to the section on universities, page 636, Chapter 19, Education Cultural Activities and Research.

The Canberra College of Advanced Education was established following a decision by the Commonwealth Government in October 1966 to accept the recommendations of a committee of inquiry into the need for a college of advanced education in the Australian Capital Territory. The College is organised into schools and in 1972 courses were offered in the School of Administrative Studies, the School of Applied Science, the School of Liberal Studies and the School of Teacher Education. It is envisaged that additional schools will be established as other specialised fields of study are introduced.

### Health

The Canberra Hospital serves the population of Canberra and the surrounding region. At 30 June 1972 it had 683 beds, a visiting medical staff of 230, 44 salaried medical staff, and a nursing staff of 837. For further information about health services in the Australian Capital Territory *see* the Public Health chapter in Year Book No. 53 (pages 549–50) and Year Book No. 56 (page 431) for administrative changes which took place in 1969.

### Justice

The Australian Capital Territory has a Supreme Court and a Court of Petty Sessions. There is an Australian Capital Territory Police Force which at 30 June 1972 numbered 398 including the Commissioner and Superintendent. Of the total, 132 were engaged in Number 1 Division located at headquarters including 2 at the Canberra Police Citizen's Youth Club. Number 2 Division which is located at Woden Centre Police Station comprised 67 members including 2 at Jervis Bay and is also responsible for both Embassy and Parliament House Security. The Traffic Division comprised 95 members including the specialised Water Police, those involved in accident investigation, the Breath Analysis and the Safety Education Sections. There were 41 in the Criminal Investigation Division containing a Women Police Section of 5. There were also 50 in the Planning and Research Division including one member of the Women Police. The Recruitment and Training Division located at Woden Centre Police Station had a staff of 8 and there were three in the Special Branch.

### Finance

In the following table identifiable receipts and outlay relating to the Australian Capital Territory have been classified in a National Accounts form. The table covers transactions of the Commonwealth Government in respect of the Australian Capital Territory in the Commonwealth Consolidated Revenue Fund and the following trust funds: Australian Capital Territory Forestry, Australian Capital Territory Housing, Australian Capital Territory Transport and Australian Capital Territory Suspense. In addition, details of the financial transactions of the following semi-government authorities are also covered: Australian Capital Territory Electricity Authority, Commonwealth Brickworks, National Capital Development Commission, and the Canberra Theatre Trust. Revenue derived by the Commonwealth from income taxes, sales tax, etc., levied in the Australian Capital Territory and expenditure by the Commonwealth in the Australian Capital Territory on such items as defence, civil aviation, railways, etc., and payments to residents from the National Welfare Fund are not included.

**AUSTRALIAN CAPITAL TERRITORY: RECEIPTS AND OUTLAY**  
**1966-67 TO 1970-71**  
**(\$'000)**

	1966-67	1967-68	1968-69	1969-70	1970-71
<b>RECEIPTS</b>					
Taxation—					
Liquor . . . . .	197	226	259	285	332
Motor registration . . . . .	669	760	890	912	1,038
Stamp duties(a) . . . . .	305	298	383	1,969	2,475
Other taxes, fees, fines, etc., . . . . .	950	762	759	911	1,539
Interest, rent, etc. . . . .	1,964	2,128	2,382	2,855	1,639
Public enterprises income . . . . .	6,564	7,778	7,870	9,546	8,474
Net sale of public corporation securities . . . . .	533	2,207	260	588	511
Other receipts(b) . . . . .	2,451	93	1,136	1,319	1,092
Net charge to Commonwealth budget . . . . .	57,166	63,151	64,877	70,498	84,330
<b>Total receipts . . . . .</b>	<b>70,800</b>	<b>77,403</b>	<b>78,815</b>	<b>88,882</b>	<b>101,430</b>
<b>OUTLAY</b>					
Net current expenditure on goods and services—					
Law, order and public safety . . . . .	1,237	1,584	1,810	2,140	3,218
Education . . . . .	5,254	6,200	7,663	9,376	13,001
Public health and welfare . . . . .	3,710	4,195	4,401	5,189	7,105
Other . . . . .	7,156	8,031	9,517	11,456	13,076
Net capital expenditure on new assets and stocks—					
Education . . . . .	4,574	5,240	5,549	8,334	9,052
Cultural and recreational facilities . . . . .	3,675	4,111	2,054	3,171	1,813
Public health and welfare . . . . .	1,162	244	301	1,159	394
Water supply and sewerage . . . . .	13,534	10,416	7,041	7,359	7,076
Roads and bridges . . . . .	8,038	10,631	14,774	14,431	16,983
Power, fuel and light . . . . .	3,089	2,946	2,698	1,985	2,795
Housing . . . . .	1,886	4,156	6,189	2,420	474
Other . . . . .	8,549	11,303	12,118	13,324	24,285
Net purchase of existing assets(c) . . . . .	-2,165	-2,967	-7,219	-7,693	-15,346
Interest paid . . . . .	260	310	426	446	419
Cash benefits . . . . .	365	441	481	345	388
Net advances for housing . . . . .	10,281	10,398	10,254	14,385	15,761
Grants towards private capital expenditure . . . . .	195	164	757	1,055	936
<b>Total outlay . . . . .</b>	<b>70,800</b>	<b>77,403</b>	<b>78,815</b>	<b>88,882</b>	<b>101,430</b>

(a) Estimated for years prior to 1969-70. (b) Includes movements in cash, investments, etc. (c) Minus sign (-) denotes excess of receipts (from sales) over expenditures on, or purchases of, existing assets, including housing.

## NORFOLK ISLAND

### General description

Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude 29°S., longitude 168°E. approximately. Its total area is approximately 14 square miles, the island being about 5 miles long and 3 miles wide. It is 1,035 miles from Sydney and 660 miles from Auckland. The length of the coast line is 20 miles, and its form that of an irregular ellipse. Except for a portion on the south side and the landing place at Cascade on the northern side, almost inaccessible cliffs rise from the water's edge. The climate is equable, the temperature ranging between 45° and 81°F. The average annual rainfall is 53 inches.

After serving as a penal station from 1788 to 1813 and from 1825 to 1855, Norfolk Island in 1856 became the home of the remaining descendants of the *Bounty* mutineers. The population recorded at the Census of 30 June 1971 was 1,422.

### Administration

In 1856 the island was created a distinct and separate settlement under the jurisdiction of New South Wales. In 1896 it was made a dependency under the Governor of that Colony, and finally, by the passage of the *Norfolk Island Act* 1913, it was accepted by the Commonwealth Parliament as a Territory of Australia. It is controlled by the Minister for External Territories through an Administrator. The Norfolk Island Council was established pursuant to the *Norfolk Island Act* 1957-1969 and is constituted in accordance with the provisions of the *Norfolk Island Council Ordinance* 1960-1970. The Council may consider and tender advice to the Administrator on any matter affecting the peace, order and good government of Norfolk Island, and must be consulted on certain legislative and financial matters. The Council comprises the Administrator as *ex officio* chairman and voting member and eight members elected biennially.

### Economic activity

The major economic activities of the island are the tourist trade, primary production, and Government instrumentalities.

*Primary industries.* The soil on the island is particularly fertile, the climate equable and the rainfall fairly evenly distributed except for a pronounced dry period in November. This enables a wide range of temperate and semi-tropical products to be cultivated. However, the island's comparative isolation presents trading difficulties, and production of bean seed, formerly the major export, has declined rapidly since 1962-63.

Fish abound off the island. In the past a number of ventures have been formed to exploit this resource, but they have been short-lived, mainly because of the lack of a sheltered harbour. A modern whaling station was started on the island in 1955, and production commenced during the second half of 1956. Owing to a marked scarcity of whales after 1961, however, the station was closed down.

An active forestry programme is being carried out to increase the resources of Norfolk Island pine and to introduce suitable types of eucalypts.

*Tourists.* Regular sea and air services to the island are available for those who seek a quiet holiday in surroundings of beauty and historic interest. There are at present, apart from flats and unlicensed guest houses, hotels and licensed guest houses, and further accommodation is being built to meet the steadily increasing number of visitors.

*Employment.* A large proportion of the population derives its income from various aspects of the tourist industry including the operation of hotels and duty-free stores. The Commonwealth Government provides services through staff from the Departments of Civil Aviation and Interior (Meteorological Branch) and teachers are seconded by the N.S.W. State Education Department. A number of clerical and other positions are available to islanders in the Norfolk Island Administration. Very few people rely for their income entirely on agricultural pursuits.

### Trade, transport and communication

Imports to Norfolk Island since the 1939-45 War have risen from \$65,000 in 1945-46 to \$3,678,000 in 1970-71. The major proportion (\$1,883,000) in 1970-71 come from Australia and the Pacific Islands while New Zealand supplied \$558,000. Exports rose from \$18,500 in 1945-46 to \$420,000 in 1960-61, but declined after whaling ceased in 1962-63 and in 1970-71 amounted to \$279,000. Exports to Australia and the Pacific Islands, the principal market, amounted to \$189,000, while exports to New Zealand amounted to \$73,000. No duties are chargeable on goods imported into Australia from Norfolk Island if the goods are the produce of manufacture of Norfolk Island, shipped direct to Australia, and not goods which if manufactured or produced in Australia would be subject to excise duty.

A shipping service to the island operates at approximately two-week intervals from Sydney via Norfolk Island to Noumea and Vila, thence to Sydney. A service linking Sydney and Noumea includes a call at Norfolk Island on the outward voyage about every three weeks. A link with New Zealand is maintained by a service operating from Auckland at approximately 26-day intervals and calling at Norfolk, Noumea, Brisbane, Lyttleton and Auckland.

A passenger and air freight service between Sydney and Norfolk Island is operated by Qantas Airways Ltd twice a week, and more frequently in peak periods. The service extends to New Zealand under charter to Air New Zealand Ltd.

There are approximately fifty miles of motor road on the island. A substantial section of the population possesses private motor cars, and taxi-cab and bus services are available.

The island has an automatic telephone service and a radio telephone link with Sydney. A local broadcasting service is operated by the Administration.

### Education

Education is free and compulsory between the ages of 6 and 15 years. The school, which is conducted by the New South Wales Department of Education, conforms to the Australian standard of public education, ranging from kindergarten to the School Certificate (Fourth Form) examination. The teachers are provided by the New South Wales Education Department, although they receive salaries from the Norfolk Island Administration. The number of scholars enrolled at 30 June 1971 was 318.

Bursaries are available for pupils who wish to attend a mainland school either to continue their studies beyond the School Certificate level or undertake high school courses not available on the Island. Trainee scholarships are available for pupils who have left school and wish to undertake apprenticeship or similar training away from the Island.

### Judiciary

The judicial system of Norfolk Island consists of a Supreme Court and a Court of Petty Sessions. The Supreme Court is the highest judicial authority in the Territory and is a superior court of record with original criminal and civil jurisdiction. The jurisdiction of this Court is exercised by one judge sitting in Court or, to the extent and in the cases provided by or under ordinance, sitting in Chambers. The jurisdiction of the Court of Petty Sessions is exercised by the Chief Magistrate or any three magistrates other than the Chief Magistrate.

### Finance

The revenue of the Territory, together with an annual grant from the Commonwealth Government for administrative expenses, is paid to the credit of the Norfolk Island Trust Fund, and advances for administrative and developmental expenses are drawn from the account. The principal items of revenue and expenditure for the five years 1966-67 to 1970-71 were as follows.

#### NORFOLK ISLAND: REVENUE AND EXPENDITURE, 1966-67 TO 1970-71 (\$'000)

	1966-67	1967-68	1968-69	1969-70	1970-71
REVENUE					
Commonwealth subsidy . . . . .	66	66	66	66	66
Customs duties . . . . .	90	110	105	116	146
Sale of liquor . . . . .	53	56	61	68	69
Post office . . . . .	138	122	260	219	236
All other . . . . .	50	71	87	130	154
<b>Total revenue . . . . .</b>	<b>397</b>	<b>425</b>	<b>579</b>	<b>599</b>	<b>671</b>
EXPENDITURE					
Administrative . . . . .	73	89	104	124	149
Miscellaneous services . . . . .	27	20	25	26	79
Social expenditure . . . . .	97	126	142	154	176
Repairs and maintenance . . . . .	66	67	87	87	136
Capital works and services . . . . .	126	232	87	120	98
Postal services . . . . .	32	59	56	57	122
Other business undertakings . . . . .	7	7	..	..	..
<b>Total expenditure . . . . .</b>	<b>428</b>	<b>600</b>	<b>501</b>	<b>568</b>	<b>760</b>



## PAPUA NEW GUINEA

Greater detail on the subjects dealt with in this section is available in the Papua New Guinea Administration Annual Reports. The sections on pages 977-83 have been prepared by the Director of the Commonwealth Bureau of Meteorology.

### General description

Papua New Guinea comprises the Australian Territory of Papua and the United Nations Trust Territory of New Guinea. The total area of 178,260 square miles lies in the equatorial zone between the equator and 12°S latitude and longitudes 141°E and 160°E.

Papua lies wholly within the tropics. The northernmost point touches 5°S latitude; its southernmost portion, comprising Tagula and Rossel Islands, lies between 11°S and 12°S latitude. It is separated from Australia by Torres Strait. The total area is 86,100 square miles of which 83,325 are on the mainland and 1,936 on the islands of the Trobriand, Woodlark, D'Entrecasteaux, and Louisiade groups.

The Trust Territory of New Guinea extends almost from the equator to latitude 8°S, a distance of almost 500 nautical miles, and from longitude 141°E to 160°E, a distance of 1,000 nautical miles. The total area is 92,160 square miles, of which 69,095 are on the mainland and 23,065 on the islands, including the two northernmost islands of the Solomon Islands, Buka and Bougainville, and the Bismark Archipelago.

### Weather and climate

The climate, particularly the rainfall, over so wide an area as Papua New Guinea, with its numerous islands and varying elevations, presents many variations. Generally speaking, the climate is hot and humid, except in the highlands where days are mild to warm and nights are cool. Mean temperatures vary little throughout the year, and there are no winter and summer seasons comparable to those of higher latitude.

The predominant seasonal feature is the regular alternation between two major air-streams, the south-east trade winds and north-west monsoon. The 'south-east' season prevails approximately from May to October, and the 'north-west' season persists for a shorter period from about December to early April. Two short spells of calm weather occur between these two seasons.

#### Rainfall

There are great spatial variations in the amount of rainfall received over Papua New Guinea. The variations depend mainly upon the direction and speed of the air streams. These streams are moist, requiring only a small amount of lifting for condensation of water vapour to occur. Topography therefore has a dominating influence on the rainfall distribution.

#### Average annual rainfall

The table on page 979 shows the average annual and monthly rainfall for selected stations. It may be seen that the spatial distribution of average annual rainfall varies greatly, being dependent mainly on topography in relation to prevailing winds. The annual averages vary from 39 inches at Port Moresby (township) to 227 inches at Kikori at the head of the Gulf of Papua. There are few rainfall observing stations above 6,000 feet, so that rainfall above that height must generally be estimated. The map on page 983 shows the rainfall distribution over the region for the year 1971.

#### Seasonal distribution of rainfall

Places in Papua such as Port Moresby, where the south-east trade wind does not blow directly onshore, have a dry season during May-October. Places such as Kikori have heavier rainfall during May-October because of the onshore south-east winds. In New Guinea, where conditions are more equatorial, rainfall occurs throughout the year, but is heaviest in the November-April period at most places.

#### Variability of rainfall

There are marked variations from year to year in annual rainfall totals. At Port Moresby (township), for example, in forty-two years of record the annual rainfall has varied from 72 inches to 23 inches; at Daru in fifty-four years of record the annual rainfall has varied from 156 inches to 46 inches; and at Madang in forty years of record the variation has been from 180 inches to 92 inches. The table on page 980 shows the annual rainfall at Port Moresby and Lae for the years 1946 to 1971 inclusive.

### Heavy rainfalls

Highest twenty-four hour rainfall registrations have included 21.60 inches at Pondo Plantation in New Britain and 17.60 inches at Cape Nelson on the east coast of the main island. Twenty-four hour falls greater than 15 inches have been recorded at a number of other stations in the Papua New Guinea region. The highest twenty-four hour fall recorded in Australia was 36 inches at Crohamhurst, Queensland. All these registrations were for the restricted twenty-four hours period from 9 a.m. to 9 a.m. Higher falls, possibly approaching 30 inches, have probably occurred in Papua New Guinea in unrestricted periods of twenty-four consecutive hours.

### Temperature

Although the region generally has no summer and winter seasons, it has a wide range in temperature because of elevation differences. For each month the mean daily maximum temperature decreases by about 2°F and the mean daily minimum temperature by about 4°F for each 1,000 feet increase in elevation up to 5,000 feet.

A table on page 980 shows temperature and humidity data for five lowland and two highland stations. Mount Hagen, elevation 5,350 feet, is the highest station for which temperature data are available. However, both day and night temperatures continue to decrease with elevation above this level.

### Average seasonal temperature distribution

In the lowland areas there is a difference in temperature pattern between the areas south of the highlands and those to the north. In the south there is a tendency for temperatures to be lower in the May–October period than in the November–April period (e.g. Samarai). In the north there is little difference throughout the year (e.g. Madang). In the highlands, temperatures are appreciably lower than in the lowlands and are slightly lower in the middle of the year than they are at the beginning of the year (e.g. Goroka). The nights are cold in the highlands throughout the year; the mean daily minimum at Mount Hagen for July is 54.7°F.

### Extreme temperatures

The highest air temperature recorded at Lae (in twenty-two years of record) was 101.7°F and the lowest was 66.3°F; at Port Moresby (in thirty-two years of record) the highest was 97.4°F and the lowest was 57.3°F. The mean daily range of temperature is about 15°F at lowland stations and 20°F at highland stations up to 5,000 feet elevation.

### Humidity

Humidity is high generally throughout the year. In the lowlands persistently high humidity in association with high temperatures is responsible for the human discomfort experienced. The average relative humidity for January and July is shown for selected stations in a table on page 980.

In the lowland areas the average monthly 9 a.m. relative humidity (*see* table on page 980) is in the range 75–95 per cent throughout the year. There is little variation from month to month at any station. This is in contrast with northern Australian localities where the south-east winds of the dry season result in low relative humidities. For example, Darwin's average relative humidity at 9 a.m. ranges from 81 per cent in February to 62 per cent in July.

In the highland areas up to 6,000 feet elevation the average monthly 9 a.m. relative humidity is within the range 80–90 per cent throughout the year. The lower temperatures experienced on the highlands result in conditions being generally more comfortable in those areas.

### Evaporation

The only evaporation data available are records for Port Moresby. These show that the mean monthly tank evaporation varies from 5–6 inches per month in the early part of the year to 6–7 inches per month in the latter part of the year. The average annual tank evaporation at Port Moresby over an eleven-year period was 73.59 inches. It is probable that evaporation is less than this value in the higher humidity areas.

### Sunshine and cloud

Mean daily sunshine hours are recorded for each month at Port Moresby, and the figures show a variation from 6.1 hours per day in February and March to 8.4 hours per day in November. The mean daily amount of sunshine at Port Moresby for the year is 6.9 hours, which is significantly less than Darwin (8.4 hours) but comparable with Brisbane (7.5 hours).

At Port Moresby the mean cloud amount varies from 5.1 eighths per day in June to 6.7 eighths in February; at Lae the variation is from 6.0 eighths in May, October and November to 6.7 eighths in January, February and March. The mean daily cloud amounts for the year at Port Moresby and Lae are 5.7 and 6.3 eighths respectively, which are high in comparison with Darwin (3.1).

### Winds

As mentioned previously the south-east trade winds prevail from May to October and the north-west monsoonal winds prevail from December to March over most of the region. However, the broad-scale wind pattern may be completely masked by the effects of local topography and land and sea breezes. The mean 9 a.m. and 3 p.m. wind speeds and prevailing directions are shown in the tables on pages 987-8 for Port Moresby and Lae.

At Port Moresby the mean winds are stronger during the period May-November than during December-April; for example, the 3 p.m. mean wind for August is 13.2 mph and for March is 8.0 mph. The winds at 3 p.m. are much stronger than at 9 a.m.; for example, for the year the 3 p.m. mean wind is 10.3 mph and the 9 a.m. mean wind is 3.7 mph. The prevailing direction of the wind is south-east during May-November and north-north-west to south-west during December-April.

At Lae the winds are mainly lighter than at Port Moresby. In the period May-October the winds at Lae are lighter than in the period November-April. The winds at 3 p.m. are greater than at 9 a.m. except in February and March. The prevailing direction is north-west at 9 a.m. and south-east at 3 p.m. throughout the year.

### Storms and cyclones

The Papua New Guinea region is subject to thunderstorm activity, squall lines and local storms throughout the year. Severe thunderstorms are frequent in the mountainous areas, but also occur in coastal lowlands. The main tropical cyclone belt lies to the south of the region, but occasionally a tropical cyclone affects the region, causing loss of life and property.

### Climatological tables

The averages and extremes for a number of elements recorded at Port Moresby and Lae are given in the tables on pages 981-2. These tables generally follow the format given for Australian capital cities included in Chapter 2 of this Year Book, the observational data being for available years of record to 1971 inclusive unless otherwise stated. Some elements included in the Australian capital city tables have been omitted from the tables for Port Moresby and Lae because of the inadequacy of observational records.

PAPUA NEW GUINEA: AVERAGE MONTHLY AND ANNUAL RAINFALL FOR  
SELECTED STATIONS(a)  
(Inches)

Station (lat. long.)	Years of record	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Bwagaia(b) (10° 42' 152° 50')	42	10.20	12.45	10.86	11.60	12.04	10.13	7.01	8.73	9.35	9.87	9.85	8.92	121.01
Daru(b) (9° 04' 143° 12')	70	11.01	10.22	12.81	12.77	8.91	4.25	3.71	2.04	1.70	2.20	4.32	8.06	82.00
Dogura(b) (10° 00' 149° 55')	45	9.18	8.63	8.74	6.10	3.63	3.66	3.06	2.57	3.08	3.22	3.43	4.72	60.02
Gobaragere(b) (9° 50' 147° 45')	39	7.66	6.87	7.71	8.32	4.26	3.07	1.80	2.02	2.40	3.09	5.08	6.54	58.82
Ka:ruku(b) (8° 51' 146° 32')	47	9.53	10.81	8.96	5.23	1.91	1.83	1.09	0.54	1.57	1.57	2.11	5.24	50.39
Kerema(b) (7° 57' 145° 46')	50	9.08	9.08	10.49	11.23	17.07	15.17	13.68	12.97	13.25	11.79	8.14	8.20	140.15
Kikori(b) (7° 24' 144° 15')	52	12.46	13.21	14.44	17.08	29.47	28.89	25.82	22.03	24.31	18.78	12.82	11.79	231.10
Kokoda(b) (8° 58' 147° 43')	49	13.33	13.08	14.14	12.86	10.15	7.37	7.11	8.68	10.72	12.68	16.02	14.13	140.27
Kokopo(c) (4° 20' 152° 15')	39	8.41	7.40	8.65	6.63	4.73	4.71	6.54	5.74	4.34	4.58	6.32	8.90	76.95
Kwikila(b) (9° 44' 147° 44')	47	6.21	5.25	6.95	5.97	3.23	2.08	1.80	1.71	2.30	2.03	2.60	4.28	44.41
Lae(c) (6° 43' 147° 00')	34	10.62	9.24	12.90	15.92	16.54	16.29	19.49	20.14	18.40	15.35	13.31	12.95	181.15
Lindenhafen(c) (6° 16' 150° 28')	36	6.45	5.64	6.85	11.42	25.10	33.27	38.41	42.56	29.33	17.01	11.08	7.50	234.62
Losuia(b) (8° 32' 151° 04')	50	17.00	16.53	15.15	13.47	13.16	12.11	12.28	10.62	10.89	10.18	9.39	10.88	151.66
Madang(c) (5° 13' 145° 47')	22	14.39	11.41	13.18	17.48	14.52	8.27	6.86	5.20	5.92	12.36	15.26	14.98	139.83
Port Moresby(b)(d) (9° 26' 147° 13')	26	6.68	8.69	7.79	6.35	2.04	1.67	0.78	1.26	1.61	1.57	2.73	6.19	47.36

(a) With twenty or more years of record to 1971.

(b) Papua.

(c) New Guinea.

(d) See page 981.

## RAINFALL: PORT MORESBY AND LAE, 1946 TO 1971

Year	Port Moresby (Papua)		Lae (New Guinea)	
	Amount	No. of days	Amount	No. of days
	in		in	
1946	61.79	137	(a)168.64	(a)248
1947	40.61	154	180.37	261
1948	45.82	138	179.26	267
1949	43.20	164	174.78	275
1950	47.67	137	158.51	251
1951	45.51	108	191.59	250
1952	54.88	150	165.58	274
1953	36.20	126	197.76	264
1954	46.49	118	173.70	277
1955	39.33	128	155.26	261
1956	56.60	141	122.39	233
1957	51.89	129	238.66	282
1958	46.02	107	190.02	250
1959	41.65	126	185.78	245
1960	34.17	116	167.50	260
1961	42.75	136	193.09	267
1962	43.98	133	182.84	261
1963	58.76	138	165.18	254
1964	55.02	151	163.10	244
1965	40.73	103	175.93	265
1966	41.25	116	206.19	291
1967	57.05	147	198.86	263
1968	44.44	116	185.68	265
1969	44.50	125	220.46	262
1970	57.49	154	210.57	277
1971	45.59	162	160.48	230

(a) Incomplete for July and August.

PAPUA NEW GUINEA: TEMPERATURE AND RELATIVE HUMIDITY FOR  
SELECTED STATIONS

Station	Lat.	Long.	Altitude ft	Years of record	Temperature °Fahr.				Relative humidity			
					Mean max. Jan.	Mean max. July	Mean min. Jan.	Mean min. July	Mean 9 a.m. Jan.	Mean 9 a.m. July	Mean 3 p.m. Jan.	Mean 3 p.m. July
Daru(a)	9° 04'	143° 12'	15	14	89.3	83.2	74.1	72.5	87	78	72	75
Goroka(b)	6° 04'	145° 23'	5,140	15	78.6	76.6	59.3	56.9	84	83	56	51
Kikori(a)	7° 24'	144° 15'	244	5	89.7	80.4	71.5	69.8	91	95	72	86
Madang(b)	5° 13'	145° 47'	14	21	86.3	85.2	73.7	73.0	87	82	75	75
Mount Hagen(b)	5° 52'	144° 14'	5,350	8	75.8	72.9	56.0	54.7	83	88	66	66
Samarai(a)	10° 37'	150° 40'	136	13	88.5	80.6	76.2	73.0	79	82	76	82
Wewak(b)	3° 34'	143° 38'	16	12	86.3	86.3	73.4	73.0	83	82	76	75

(a) Papua. (b) New Guinea.



## CLIMATOLOGICAL DATA: PORT MORESBY (PAPUA)

(Jackson's Strip, Lat. 9° 26' S., Long. 147° 13' E., Height above M.S.L. 92 ft)

## BAROMETER, WIND, EVAPORATION AND CLOUD

Month	No. of years of observations	Bar. corrected to 32° F. mm sea level and standard gravity from 9 a.m. and 3 p.m. readings (m. bars)	Wind (height of anemometer 32 ft)					Mean amount of clouds, 9 a.m., 3 p.m., 9 p.m.(a)	
			Average miles per hour		Highest gust speed (mph)	Prevailing direction			
			9 a.m.	3 p.m.		9 a.m.	3 p.m.		
January	23	1,007.0	3.6	8.4	56	N	W	6.58	6.6
February	23	1,007.1	3.7	8.2	62	NNW	W	5.65	6.8
March	23	1,007.4	3.4	8.0	49	NNW	W	6.00	6.5
April	23	1,008.1	2.0	7.6	40	N	S	5.48	6.1
May	23	1,008.5	2.9	9.8	43	SE	SSE	5.79	5.1
June	23	1,009.7	4.5	11.5	46	SE	SSE	5.51	5.0
July	23	1,009.9	5.5	12.9	46	SE	SE	6.32	5.2
August	23	1,009.9	5.4	13.2	47	SE	SE	6.77	5.3
September	23	1,010.0	5.2	14.0	46	SE	SSE	7.09	5.3
October	23	1,009.1	3.6	11.8	46	SE	SSE	7.93	5.4
November	23	1,008.1	2.6	9.9	40	SE	SE	7.93	5.3
December	23	1,007.0	2.7	8.6	54	N	SW	7.28	5.9
Year {	Total							78.33	
Averages	23	1,008.5	3.7	10.3	..	SE	SSE	..	5.7
Extremes			..	..	55	..	..	..	

(a) Scale 0-8.

## TEMPERATURE AND SUNSHINE

Month	No. of years of observations	Mean temperature (° Fahr.)			Extreme shade temperature (° Fahr.)		Extreme temperature (° Fahr.)		Mean daily hours of sunshine	
		Mean max.	Mean min.	Mean	Highest	Lowest	Lowest on grass			
January	32	89.3	73.6	81.5	97.2	68.8	27/49	65.3	21/66	6.2
February	32	88.7	73.4	81.1	97.0	65.8	17/57	62.2	3/68	6.1
March	32	88.6	73.3	80.9	95.8	65.0	23/61	58.0	31/66	6.2
April	32	87.7	72.9	80.3	93.6	62.3	11/46	56.6	1/66	7.0
May	32	87.3	73.0	80.1	92.9	58.1	28/53	54.0	18/66	7.4
June	32	86.0	71.9	78.9	93.0	58.0	23/54	54.0	29/65	7.0
July	32	85.4	71.1	78.3	92.0	57.3	8/46	50.8	30/65	6.6
August	32	85.9	71.5	78.7	92.8	58.6	14/61	50.3	31/67	6.8
September	32	86.8	72.3	79.5	94.6	58.0	10/61	48.0	1/67	6.8
October	32	88.5	73.0	80.7	95.9	61.3	11/55	52.2	5/65	7.4
November	32	89.8	73.0	81.4	97.3	62.1	10/67	55.0	4/63	8.4
December	32	90.0	73.5	81.7	97.4	67.2	1/63	62.9	16/67	7.3
Year { Averages	..	87.8	72.7	80.3	97.4	57.3	..	48.0	..	6.9
Extremes	..	..	..	..	16/12/67	8/7/46	..	1/9/67	..	..

## HUMIDITY, RAINFALL AND FOG

Month	No. of years of observations	Vapour pressure mean 9 a.m. (m.bars)	Mean relative humidity % at 9 a.m.	Rainfall (inches)				Fog mean No. days				
				Mean mthly	Mean No. of days of rain	Greatest monthly	Least monthly		Greatest in one day			
No. of years of observations	23	23	26	24	26	26	26	26	24			
January	.	28.1	77	6.68	17	18.30	1967	1.02	1950	4.18	26/67	3.3
February	.	28.5	81	8.69	19	17.08	1957	2.37	1947	5.54	14/49	3.8
March	.	28.4	80	7.79	18	17.42	1951	1.11	1950	4.42	16/51	7.2
April	.	28.6	81	6.35	15	28.65	1946	0.36	1966	12.89	12/46	7.7
May	.	28.2	79	2.04	8	7.35	1952	0.08	1958	3.02	18/60	6.9
June	.	26.4	78	1.67	6	12.33	1963	0.00	1957	8.06	5/63	3.7
July	.	25.2	77	0.78	6	2.75	1949	0.01	1958	1.33	1/52	2.5
August	.	25.0	75	1.26	7	5.43	1953	0.02	1959	1.94	22/53	2.4
September	.	25.4	73	1.61	7	13.53	1958	0.00	(a)	5.90	5/58	1.9
October	.	26.2	69	1.57	7	7.12	1948	0.06	1951	2.13	31/64	2.4
November	.	26.4	68	2.73	8	9.22	1952	0.00	1965	3.56	29/54	3.3
December	.	27.6	73	6.19	13	10.57	1954	0.99	1967	4.83	29/65	2.9
Year	{ Totals	.	.	47.36	131	..	..	..	..	..	..	48.0
	{ Averages	27.0	76	..	11	..	..	..	..	..	..	..
	{ Extremes	..	..	..	..	28.65	..	0.00	(b)	12.89	..	..
						4/1946				12/4/46		

(a) 1948 and 1950.

(b) June 1957, September 1948 and 1950, and November 1965.

## CLIMATOLOGICAL DATA: LAE (NEW GUINEA)

(Meteorological Office: Lat. 6° 43' S., Long. 147° 00' E., Height above M.S.L. 25 ft)

## BAROMETER, WIND AND CLOUD

Month	Bar. corrected to 32 °F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m. bars)	Wind (height of anemometer 32 ft)				Mean amount of clouds 9 a.m., 3 p.m., 9 p.m.(a)	
		Average miles per hour		Highest gust speed (mph)	Prevailing direction		
		9 a.m.	3 p.m.		9 a.m.		3 p.m.
No. of years of observations	23	25	25	25	27	27	21
January . . . . .	1,006.8	6.7	6.9	51	NW	SE	6.6
February . . . . .	1,006.8	7.2	6.9	43	NW	SE	6.8
March . . . . .	1,007.2	6.7	6.3	44	NW	SE	6.8
April . . . . .	1,008.4	3.7	6.0	45	NW	SE	6.4
May . . . . .	1,009.5	2.2	5.5	36	NW	SE	5.9
June . . . . .	1,010.5	2.3	5.4	42	NW	SE	6.1
July . . . . .	1,011.0	1.9	5.3	40	NW	SE	6.5
August . . . . .	1,011.0	2.0	5.5	40	NW	SE	6.3
September . . . . .	1,010.9	2.0	6.4	38	NW	SE	6.1
October . . . . .	1,010.1	2.7	6.7	40	NW	SE	6.0
November . . . . .	1,008.5	3.9	7.4	45	NW	SE	6.1
December . . . . .	1,007.4	5.4	6.9	46	NW	SE	6.5
Year { Averages . . . . .	1,009.0	3.9	6.2	..	NW	SE	6.3
Extremes . . . . .	..	..	..	51	..	..	..

(a) Scale 0-8.

## TEMPERATURE

Month	<i>Mean temperature (° Fahr.)</i>			<i>Extreme shade temperature (° Fahr.)</i>	
	<i>Mean max.</i>	<i>Mean min.</i>	<i>Mean</i>	<i>Highest</i>	<i>Lowest</i>
No. of years of observations	22	22	22	22	22
January . . . . .	87.9	74.7	81.3	100.8 20/59	69.2 7/60
February . . . . .	88.1	74.9	81.5	99.1 14/57	70.0 24/62
March . . . . .	87.4	74.7	81.0	101.7 6/56	71.1 16/56
April . . . . .	86.1	74.0	80.0	93.0 4/56	70.4 22/66
May . . . . .	85.0	73.3	79.1	91.8 24/52	67.0 30/53
June . . . . .	83.4	72.3	77.9	92.2 8/58	67.0 20/53
July . . . . .	82.0	71.6	76.8	89.9 16/64	66.7 31/65
August . . . . .	82.3	71.6	76.9	90.4 28/64	67.0 27/55
September . . . . .	83.6	72.0	77.8	90.0 12, 13/50	66.3 13/61
October . . . . .	85.3	72.7	79.0	95.3 31/49	66.4 4/65
November . . . . .	86.7	73.5	80.1	94.0 30/61	69.6 (a)
December . . . . .	87.3	74.3	80.8	96.1 24/59	68.5 19/64
Year { Averages . . . . .	85.4	73.3	79.3	101.7	66.3
Extremes . . . . .	..	..	..	6/3/56	13/9/61

(a) 13/1965 and 11/1968.

## HUMIDITY, RAINFALL AND FOG

Month	Vapour pressure mean 9 a.m. (m.bars)	Rainfall (inches)					Fog mean No. days
		Mean monthly	Mean No. of days of rain	Greatest monthly	Least		
					monthly	Greatest in one day	
No. of years of observations	23	34	25	34	34	25	23
January . . . . .	28.0	10.62	21	20.54 1964	4.21 1958	7.84 9/59	0.1
February . . . . .	28.5	9.24	19	15.88 1967	2.09 1957	5.26 8/53	0.1
March . . . . .	28.3	12.90	21	20.63 1952	5.52 1968	6.38 10/52	0.1
April . . . . .	28.7	15.92	22	23.71 1955	9.32 1968	7.84 15/53	0.0
May . . . . .	28.3	16.54	22	33.08 1957	2.65 1956	6.52 17/61	0.1
June . . . . .	26.5	16.29	22	30.32 1965	4.51 1964	8.90 4/51	0.0
July . . . . .	25.4	19.49	25	41.66 1953	5.63 1956	11.76 16/53	0.1
August . . . . .	25.0	20.14	24	33.99 1957	6.32 1951	10.18 14/47	0.0
September . . . . .	25.6	18.40	23	36.30 1926	7.58 1960	6.16 10/51	0.0
October . . . . .	26.5	15.35	21	27.36 1970	4.82 1956	5.77 20/63	0.1
November . . . . .	26.7	13.31	21	22.73 1948	5.04 1956	7.26 2/45	0.0
December . . . . .	27.7	12.95	21	23.81 1957	6.06 1951	8.96 16/68	0.0
Year { Totals . . . . .		181.15	262	..	..	..	0.6
Averages . . . . .	27.1	..	..	..	..	..	..
Extremes . . . . .	..	..	..	41.66	2.09	11.76	..
				7/1953	2/1957	16/7/53	

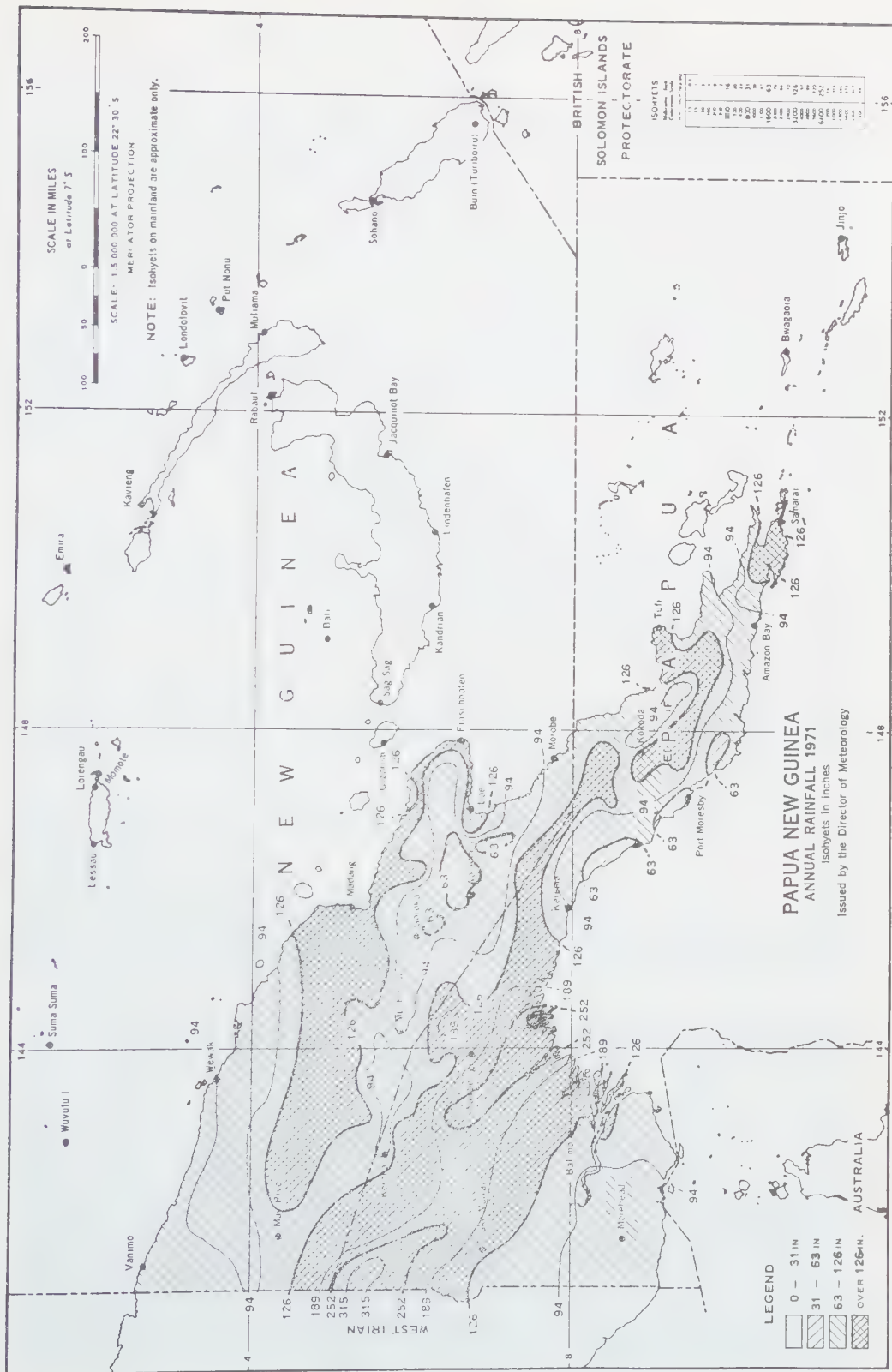


PLATE 55

## Population

The indigenous people of Papua New Guinea may in general be grouped with the Melanesians who occupy the greater part of the Western Pacific. They may be divided into two main types—Melanesian and Papuan—the former representative of the eastern mainland of Papua and the island archipelagos to the east and south-east of Papua, the Bismark Archipelago, the Solomon Islands and the coastal districts of the New Guinea mainland, the latter representative of the western third and interior of Papua and the interior of the mainland of New Guinea. Some negrito traits have been noted in a few of the inland mountain groups. There is a strain of Papuan, and, possibly, of Polynesian blood in the Admiralty Islanders, while the Western Islanders and the inhabitants of the small islands east and south-east of New Ireland are Micronesians.

Censuses of the non-indigenous population of Papua New Guinea have been taken in conjunction with censuses of the Commonwealth of Australia. For the indigenous population of Papua New Guinea, estimates of size, geographic location, and the broad age distribution of the population were available from the results of the Division of District Administration census (formerly known as the Tax Census). This was conducted over most of the country, but was continuous rather than conducted at a common date for all areas covered. No regular pattern of operations was adopted, although once the census had been taken in an area it was in general repeated fairly frequently. Although these estimates were of great value, the limitations of the information on population characteristics and the lack of simultaneous collection for all areas made them insufficient for many purposes. The 1966 census covered both indigenous and non-indigenous population, and provided, for the first time, an almost complete picture of the population of Papua New Guinea.

Figures for the non-indigenous population as enumerated at censuses held in conjunction with Commonwealth censuses and estimates of the indigenous population based on the Division of District Administration censuses are set out below.

### PAPUA NEW GUINEA: POPULATION AT CENSUSES, 1921 TO 1966

Year	<i>Indigenous</i>					<i>Non-indigenous</i>			
	<i>Enumerated</i>			<i>Persons estimated</i>	<i>Total persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>	
	<i>Males</i>	<i>Females</i>	<i>Persons</i>						
PAPUA									
1921.	•	59,825	52,687	112,512	..	..	1,408	670	2,078
1933.	•	..	..	170,836	..	..	1,232	941	2,173
1941.	•	..	..	..	..	..	..	..	..
1947.	•	..	..	..	..	..	2,057	1,182	3,239
1950.	•	117,455	104,474	221,929	146,630	368,559	..	..	..
1954.	•	151,464	134,732	286,196	202,200	488,396	3,867	2,446	6,313
1961.	•	236,676	209,632	446,308	67,340	513,648	5,490	4,304	9,794
1966.	•	310,153	281,806	591,959	..	591,959	8,307	6,070	14,377
NEW GUINEA									
1921.	•	(a)100,445	(a)66,276	(a)166,721	..	..	2,502	671	3,173
1933.	•	218,218	182,911	401,129	..	..	3,709	1,507	5,216
1941.	•	324,830	318,988	(b)684,284	300,000	984,284	..	..	..
1947.	•	..	..	..	..	..	4,369	1,831	6,200
1950.	•	415,939	354,116	770,055	301,050	1,071,105	..	..	..
1954.	•	538,113	472,480	1,010,593	184,714	1,195,307	7,201	4,241	11,442
1961.	•	721,806	647,277	1,369,083	64,300	1,433,383	9,158	6,378	15,536
1966.	•	810,153	748,205	1,558,358	..	1,558,358	11,746	8,546	20,292

(a) 1920: figures for 1921 not available. (b) Includes 34,087 indentured labourers, 1,127 native constabulary, 4,823 attending approved mission schools, and 429 patients at Anelaura Leprosarium and Taskul Observation Colony (New Ireland), for which particulars of sex are not available.

The total indigenous population of Papua New Guinea at the 1966 census was 2,150,317 persons, and the total non-indigenous, 34,669 persons. For details of selected characteristics of Population Census 1966 see Year Book No. 55, pages 1165–69. Estimated totals for 30 June 1971 are 2,466,986 and 53,132 persons respectively.



### Population Census, 1971

Full details from the Population Census 1971 are not yet available. The census was conducted in July 1971 and covered both indigenous and non-indigenous populations. For census purposes respondents were asked to state whether they considered themselves to be indigenous, European, Chinese or of some other race or mixture of these, without the guidelines provided in 1966, however, it is doubtful that this will affect comparability between the two censuses.

Preliminary figures of the population (indigenous and non-indigenous) of the major towns at the census, July 1971, was as follows: Port Moresby, 66,244; Lae, 34,699; Rabaul, 34,778; Madang, 15,751; Wewak, 12,154; Goroka, 10,756; Mount Hagen, 9,609; Daru, 5,074; Popondetta, 4,591; Lorengau, 4,009 (including Lombrum); Bulolo, 3,548; Kavieng, 3,010; Alotau, 2,516; Mendi, 2,277.

The Census completely enumerated virtually all the non-indigenous population, together with all the indigenous population located in areas outside rural villages. The rural village population was estimated by means of a representative sample of approximately 10 per cent of rural villages. Consequently the figures published for the population of rural villages are estimates of total figures based on a representative sample, while those published for other areas are totals based on complete enumeration. Totals for a district or the country as a whole are the sums of these estimated and actual figures.

### Constitutional development

The *Papua-New Guinea Provisional Administration Act* 1945-1946, which provided for the transfer back of control from the military authorities to civil authorities after the 1939-45 War, was repealed by the *Papua and New Guinea Act* 1949, which came into force on 1 July 1949. The latter Act approved the placing of the Territory of New Guinea under the International Trusteeship system and provided for an Administrative Union of the Territory of Papua and the Territory of New Guinea with one Administrator, a Legislative Council and an Executive Council, one Supreme Court, and one Public Service.

For an outline of the development of the Legislative and Executive (later Administrator's) Councils between 1949 and 1963, see Year Book No. 51, page 117.

In May 1963 the Commonwealth Government passed an amendment to the Papua and New Guinea Act, making provision for a House of Assembly of sixty-four members to replace the Legislative Council. The house then consisted of ten official members appointed by the Governor-General on the advice of the Administrator, forty-four members elected by the people of the Territory on a common roll in forty-four open electorates, and ten non-indigenous persons elected on a common roll in ten special electorates comprising one or more open electorates. The first elections for the House of Assembly were held in February-March 1964, and the inaugural meeting of the new House was convened on 8 June 1964.

The 1963 Act also increased the membership of the Administrator's Council from seven to eleven, seven of whom must be elected members of the House of Assembly.

In October 1966 the Commonwealth Parliament passed a further amendment to the Papua and New Guinea Act, providing for an increase in the membership of the House of Assembly to ninety-four, sixty-nine members representing open electorates, fifteen from regional electorates and ten official members.

The second general election for the House of Assembly was held from 17 February-16 March 1968, and the Second House was convened on 4 June 1968. The Ministerial Nomination Committee in conjunction with the Administrator chose fifteen elected members who were appointed to seven Ministerial Member and eight Assistant Ministerial Member positions.

The *Papua and New Guinea Act* 1968 provides for the Administrator's Council to become the Administrator's Executive Council, deciding major matters of Territory policy. In June 1968 it had its first meetings. It consists of the Administrator, the seven Ministerial Members, three official Members, and a twelfth Councillor who is an elected M.H.A. but a non-office holder.

The result of constitutional instruments signed in August, 1970 by the Governor-General and the Minister for External Territories was to transfer full authority in relation to specified matters to designated ministerial office holders. This effectively enhanced the role of the Administrator's Executive Council as the Administrator became bound to accept its advice in respect of these specified matters. Ministerial office holders are fully responsible for the functions of the specified departments, or parts thereof.

The third general election for the House of Assembly was held from 19 February to 11 March 1972, and the Third House was convened on 20 April 1972. Following recommendations made by the Select Committee on Constitutional Development appointed by the Second House, the number of

elected members was increased to 100; 82 members representing open electorates and 18 representing regional electorates. In addition, the number of official members was reduced to 4, and provision was made for up to 3 nominated members to be nominated by the House for special purposes. The Ministry was increased to 17, all with the designation of Minister. The Administrator's Executive Council now consists of the Administrator and 10 Ministers, one of whom is chosen by the full Ministry to be the Deputy Chairman of the Council, or in effect, the Chief Minister.

In 1972 the Papua New Guinea Act was amended to provide for the limit on the number of ministerial offices to be removed.

In August 1972, constitutional discussions were held between the leaders of Papua New Guinea and the Minister for External Territories at which it was agreed that final powers over various matters could be transferred to the Papua New Guinea Ministry now. Further discussions on the transfer of final powers are to be held, and will continue until the achievement of full internal self-government by Papua New Guinea.

Local government was introduced in 1949 by the Native Village Councils Ordinance which was replaced by the *Local Government Ordinance* 1963. The Administrator may establish by proclamation local government councils with authority in defined areas.

To enable the people to participate more fully at district level in the affairs of government in areas of planning and decision making, Area Authorities, consisting of representatives of Local Government Councils in the area, have been set up in the New Ireland District, the Northern District, and the Fly River Area in the Western District. The primary functions of the Area Authorities are to advise the Administrator on district development, and the Minister for Local Government on the allocation of rural development funds.

*Development planning.* In 1968 the Commonwealth Government and the Papua New Guinea House of Assembly endorsed as a working basis for planning the objectives and targets of a development programme covering the five years from 1968-69 to 1972-73. In August 1971 the Development Programme was reviewed to take account of major changes, mainly resulting from the development of large scale copper deposits on Bougainville.

The programme has the following main objectives.

Maximum increase in production consistent with financial and manpower resources and market capacity.

Maximum participation by Papua New Guineans at all levels.

Maximum progress towards financial self-reliance.

Maximum practicable contribution to meeting social needs and raising the level of living of the people.

A new development programme is being prepared to cover the period 1973-74 to 1977-78. Consultants have been engaged under the United Nations Development Programme to assist the Government to formulate the strategy for the new programme. The aim is to produce a programme that reflects technical expertise and experience from both inside and outside Papua New Guinea and at the same time is fully endorsed by the House of Assembly.

Following representation by a delegation of Papuan parliamentarians to the Minister for External Territories, seeking special economic consideration for Papua, consultants were engaged to study the problems of the less-developed areas in both Papua and New Guinea. The report of this study will also be used in the preparation of the next development programme.

## Judiciary

The courts which exercise jurisdiction within Papua New Guinea are: the Supreme Court of Papua New Guinea, District Courts, Local Courts, Children's Courts and Wardens' Courts.

The Supreme Court is the highest judicial authority and has unlimited criminal and civil jurisdiction. Appeals lie from decisions of a single judge to the Full Court of the Supreme Court and, subject to prescribed conditions, from decisions of the Full Court to the High Court of Australia. District Courts have criminal jurisdiction over all summary offences, i.e. generally, all offences punishable by less than 12 months' imprisonment, and conduct preliminary hearings in respect of indictable offences. They also exercise civil jurisdiction over claims for amounts up to \$2,000. Local Courts have criminal jurisdiction over summary offences and may impose penalties not greater than a fine of \$100 or six months' imprisonment, plus civil jurisdiction over matters involving up to \$200. Children's Courts have jurisdiction over all offences by persons under the age of 16 years, except the most serious offences, and in affiliation and other child welfare cases. Wardens' Courts exercise jurisdiction over offences against mining laws and civil cases concerning mining or mining lands.

In addition, there is the Land Titles Commission set up under the *Land Titles Commission Ordinance* 1962-1972 to inquire into and determine rights in land, particularly native land. The Commission has a specific function under the *New Guinea Land Titles Restoration Ordinance* 1951-1968 to inquire into and determine claims to interest in land where the official records were lost or destroyed as a result of the Japanese invasion of New Guinea.

## Agriculture and animal industry

### Soils

Although many parts of Papua New Guinea are covered by skeletal soils unsuitable for agriculture, there are extensive areas in all districts where fertile soils occur suitable for growing a variety of crops. Soils on the coastal plains consist mainly of alluvium and podsolised alluvium. The coastal swamp soils, of which there are extensive areas in the delta plains of the Sepik and Fly rivers and intermittently around the coasts and along the lower reaches of other rivers, are in general quite unsuited to any form of agricultural development.

Volcanic soils probably offer the greatest prospects for development. They are found mostly on the central plateau and southern foothills of the main island, but there are also areas in New Britain (particularly in the Gazelle and Willaumez Peninsulas), Bougainville and New Ireland, as well as in numbers of smaller islands. Other rich soils are the alluvials of the river valleys. The largest single area of this type is in the valley occupied by the Ramu and Markham Rivers.

### Land tenure

The *Land Ordinance* 1962-1969 of Papua New Guinea, which came into operation in 1963, replaced much land legislation previously in force separately in the two Territories. This simplification in legislation was a major step towards applying uniform principles to land tenure throughout the whole of Papua New Guinea. All land in Papua New Guinea other than native land or land subject to any estates, rights, titles or interests in force from time to time is Administration land.

There is considerable variation throughout Papua New Guinea in the nature of customary ownership of land. In most areas some rights remain in the landholding group, and individuals within the group have limited rights or use, either for life or for a shorter period. Thus the normal system by which the rights of ownership in land use are acquired is by birth to a landholding group. Transfer of rights between individuals by sale and purchase appears to have been unusual in the past, but this practice is now an established custom in some localities and appears to be increasing. Inheritance may be based on either patrilineal or matrilineal descent, or both. In parts of Papua New Guinea, however, there is a tendency for the whole inheritance system to change, particularly in communities where it is based on matrilineal descent. Following a close study of the problems in relation to land holdings by indigenes, the Government has laid down the following broad principles of policy.

The ultimate and long-term objective in Papua New Guinea is to introduce a single system of land holding regulated by the central Administration by statute, administered by the Department of Lands, Surveys and Mines of the central Administration and providing for secure individual registered titles after the pattern of the Australian system.

Only the Administration working through the Department of Lands, Surveys and Mines and through the Registrar of Titles may issue and register land titles.

Land subject to native custom remains subject only to native custom until it is taken out of custom either by acquisition by the Administration or by a process, provided for by the *Land (Tenure Conversion) Ordinance* 1963-1967, of conversion of title to an individual registered title. Upon either acquisition or conversion of title, compensation is provided in respect of extinction of rights under native custom.

Land held under native custom may not be acquired outside of native custom by other than the Administration. Land may not be acquired by the Administration except for prescribed public purposes unless the native owners are willing to sell and the Administration is convinced, through its Division of District Administration, Department of the Administrator, that the land is not required by them, and conversion of title from native custom to individual registered title may take place only if all those interested in the land under native custom consent to conversion and the method of conversion.

The services of Commissioners under the *Land Titles Commission Ordinance* 1962-1972 are used, as a first priority, on investigations into claims by the Administration that land is ownerless and may therefore be declared administration land, on investigation into the ownership under native custom of land proposed to be acquired by the Administration, on settlement of disputes about the ownership of land held under native custom, and on investigations into the rights held under native custom in land proposed to be converted to individual registered title. The



Commissioners, as opportunity offers, continue investigations into the holding of land under native custom; the results of such investigations are recorded for use in connection with future acquisitions or conversions of title.

The legislation and administrative steps necessary to put the remainder of this policy into effect are well advanced.

At 30 June 1972, the distribution of alienated land in Papua New Guinea according to tenure was as follows.

Held by private non-indigenous inhabitants—freehold land, 535,071 acres; leasehold land, 1,005,702 acres; land tenure conversion (freehold), 9,255 acres;

Native reserves, 94,033 acres;

Other Administration land including land reserved for public purposes, 3,797,240 acres.

## Primary industries

### General

The products of Papua New Guinea are obtained principally from its agricultural, forestry, mining, and fishing industries. Indigenous subsistence agriculture, fishing and hunting produce most of the food requirements of the indigenous population. The main indigenous agricultural products are taro, yams, sweet potatoes, bananas, and pawpaws. Peanuts are becoming of increasing importance in the indigenous diet. Non-indigenous enterprise produces most of the commodities exported. Indigenous in recent years have taken up the production of introduced crops such as peanuts, rice, cucurbits, and maize for their own consumption and produce copra, coffee, cocoa, tea, passion-fruit, pyrethrum and palm oil for export.

The principal agricultural products for the export trade are copra and coconut oil, cocoa, coffee and rubber, but exports of timber and timber products are substantial and the export of tea and palm oil is increasing.

### Non-indigenous crop production

In 1969–70 there were 1,241 holdings in use by non-indigenous persons, 333 being in Papua and 908 in New Guinea. The total area of these holdings was 1,012,706 acres, 260,163 in Papua and 752,543 in New Guinea. The following tables summarise the information available for principal activities.

PAPUA NEW GUINEA: NUMBER OF HOLDINGS  
AREA, PRODUCTION AND NEW PLANTINGS, 1966 TO 1970  
(Source: *Rural Industries Bulletin*, 1969–70, Papua New Guinea Bureau of Statistics)

Year ended 30 June—	Holdings	Area under crop(a)	Trees(a)	Production	New plantings	
					Area	Trees(b)
Coconuts—		acres	'000	tons	acres	'000
1966(c) . . .	667	264,391	12,006	90,209	5,512	377
1967(c) . . .	683	269,127	12,704	81,159	5,208	460
1968 . . . .	681	270,176	12,809	86,736	4,902	586
1969 . . . .	685	271,623	12,972	89,115	4,062	382
1970 . . . .	678	271,831	12,854	84,482	3,755	304
Cacao—						
1966(c) . . .	439	122,226	20,696	14,427	8,354	1,870
1967(c) . . .	447	126,147	21,830	15,059	4,981	1,366
1968 . . . .	447	129,706	21,400	18,092	5,446	1,749
1969 . . . .	443	133,235	22,180	18,134	5,095	1,690
1970 . . . .	441	132,003	21,714	16,748	3,830	1,330
Coffee—						
1966(c) . . .	257	13,415	8,779	3,874	1,323	1,254
1967(c) . . .	248	14,365	9,912	4,492	1,090	1,212
1968 . . . .	249	14,817	10,004	4,705	810	937
1969 . . . .	237	14,685	9,798	6,196	664	828
1970 . . . .	229	15,037	10,466	6,258	801	983
Rubber—						
1966(c) . . .	81	35,417	3,998	5,333	1,847	344
1967(c) . . .	86	37,043	4,177	5,437	1,260	305
1968 . . . .	89	35,878	4,126	5,711	484	167
1969 . . . .	83	33,964	3,901	5,850	471	134
1970 . . . .	79	33,958	3,810	5,191	561	122

(a) Includes mature and immature areas.

(b) Includes replacements.

(c) 31 March.



## PAPUA NEW GUINEA: AREA UNDER PRINCIPAL CROPS AND CROP PRODUCTION, YEAR ENDED 30 JUNE 1970

(Source: Rural Industries Bulletin, 1969-70, Papua New Guinea Bureau of Statistics)

Crop	Recorded area in acres			Unit	Recorded production			Average yield per mature acre		
	Papua	New Guinea	Total		Papua	New Guinea	Total	Papua	New Guinea	Total
Permanent crops—										
Copra—										
Plantation . . . .	33,886	237,945	271,831	ton	9,423	75,059	84,482	0.31	0.36	0.36
Trade(a) . . . .	..	..	..	..	265	4,100	4,365	..	..	..
Coconuts, for use as such . . . .	..	..	..	..	26	1,415	1,441	..	..	..
Cacao—										
Plantation . . . .	8,386	123,617	132,003	..	739	16,009	16,748	0.10	0.16	0.16
Trade(a) . . . .	..	..	..	..	33	1,160	1,193	..	..	..
Coffee—										
Plantation . . . .	857	14,180	15,037	..	47	6,211	6,258	0.09	0.54	0.52
Trade(a) . . . .	..	..	..	..	11	1,609	1,620	..	..	..
Oil palms . . . .	30	2,680	2,710	..	(b)	(b)	(b)	(b)	(b)	(b)
Rubber . . . .	32,460	1,498	33,958	ton	5,191	..	5,191	0.20	..	0.19
Tea . . . .	510	6,150	6,660	lb (dry)	(c)	1,994,503	1,994,503	..	606.00	606.00
Grain crops—										
Maize . . . .	18	365	383	bushel	175	5,361	5,536	9.72	14.69	14.45
Rice . . . .	157	248	405	ton (paddy)	121	116	237	0.77	0.47	0.59
Sorghum . . . .	491	1,338	1,829	bushel	13,331	37,293	50,624	27.15	27.87	27.68
Crops for green fodder—										
Maize . . . .	..	109	109	..	..	..	..	..	..	..
Sorghum . . . .	17	659	676	..	..	..	..	..	..	..
Other . . . .	105	1,029	1,134	..	..	..	..	..	..	..
Industrial crops—										
Peanuts . . . .	31	1,998	2,029	cwt (kernel)	157	7,330	7,487	5.06	3.67	3.69
Vegetable crops—										
Grown for sale—										
Beans (green) . . .	3	17	20	cwt	40	409	449	13.33	24.06	22.45
Tomatoes . . . .	38	19	57	..	550	1,168	1,718	14.47	61.47	30.14
Potatoes, English .	1	15	16	..	60	749	809	60.00	49.93	50.56
Potatoes, sweet . .	37	495	532	..	842	40,796	41,638	22.76	82.42	78.27
Pumpkins . . . .	35	24	59	..	932	1,600	2,532	26.63	66.67	42.92
Other . . . .	82	123	205	..	..	..	..	..	..	..
For consumption on holding—										
Potatoes, sweet . .	998	3,692	4,690	..	62,137	180,366	242,503	62.26	48.85	51.71
All other . . . .	481	1,135	1,616	..	..	..	..	..	..	..
All other crops . .	275	976	1,251	..	..	..	..	..	..	..
Total . . . .	78,898	398,312	477,210	..	..	..	..	..	..	..

(a) Production from crops purchased from Indigenous growers. production included in New Guinea.

(b) Not available for publication.

(c) An insignificant

## Indigenous agriculture

Most of the indigenous inhabitants of Papua New Guinea are agriculturalists producing fruit and vegetables for their own consumption. The crops grown vary according to environment and altitude and include yams, taro and sweet potatoes, coconuts, bananas, papaws, maize, sugar cane, cassava, beans, peanuts, rice, cucurbits, and tobacco. Sago is the staple food in the extensive semi-inundated areas which occur along the lower valleys of the major rivers. In these areas it is cut largely from naturally occurring stands. In other parts of the country small areas of sago are grown along stream banks and in swampy patches and are regarded as a reserve in times of poor harvest. In recent years the indigenes have taken up the production of introduced crops such as peanuts, rice, cucurbits, tobacco and maize for their own consumption, and cocoa, coffee, tea, palm oil, passion fruit and pyrethrum for export. Some small-scale rubber growing is now being undertaken. In coastal areas large quantities of copra are produced. In 1969-70 estimated indigenous production was: copra, 47,276 tons; coffee, 22,425 tons; cocoa, 6,984 tons. In many localities the indigenes follow a farming system known as bush fallowing rotation, which is described in Year Book No. 48, and earlier issues.

The growing of food is done by both the men and the women. The division of work is usually clearly defined within the village itself, but this division is not necessarily the same in all areas. Generally the felling of forests is done by the men, and carrying the harvested food home to the village is done by the women. Other work, however, such as cultivating, planting and weeding may be done by either men or women according to the customs of the particular village or area.

The advancement of indigenous agriculture for local food supply and improved land use in village gardens as well as for economic production of crops for sale have a high priority in Government policy for Papua New Guinea. In recent years the Administration has intensified the programme of agriculture extension work among the indigenes. Indigenous cattle projects are increasing rapidly, and the greater part of the country's coffee crop is produced by the indigenous sector.

**PAPUA NEW GUINEA: AREA OF PRINCIPAL CROPS AND  
CROP PRODUCTION, YEAR ENDED 30 JUNE(a)**

*(Sources: Rural Industries Bulletin 1969-70; Papua New Guinea Bureau of Statistics and Indigenous Crop and Cattle Statistics; Department of Agriculture, Stock and Fisheries, Papua New Guinea)*

	Area under crop (acres)			Quantity of production (tons)		
	Indigenous	Non-indigenous	Total	Indigenous (b)	Non-indigenous	Total
Coconuts—						
1966 . . .	292,615	264,391	557,006	36,991	90,209	127,200
1967 . . .	305,630	269,127	574,757	34,504	81,159	115,663
1968 . . .	344,540	270,176	614,716	38,644	86,736	125,380
1969 . . .	348,742	271,623	620,365	43,801	89,115	132,916
1970 . . .	235,414	271,831	607,245	42,911	84,482	127,393
Cocoa—						
1966 . . .	35,915	122,226	158,141	4,131	14,427	18,558
1967 . . .	38,075	126,147	164,222	5,032	15,059	20,091
1968 . . .	39,569	129,706	169,275	5,546	18,092	23,638
1969 . . .	44,285	133,235	177,520	5,883	18,134	24,017
1970 . . .	46,720	132,003	178,723	5,792	16,748	22,540
Coffee—						
1966 . . .	41,590	13,415	55,005	6,791	3,874	10,665
1967 . . .	46,613	14,365	60,978	10,566	4,492	15,058
1968 . . .	47,691	14,817	62,508	9,634	4,705	14,339
1969 . . .	49,666	14,685	64,351	14,942	6,196	21,138
1970 . . .	53,195	15,037	68,232	20,895	6,258	27,153
Pyrethrum—						
1966 . . .	3,224	..	3,224	252	..	252
1967 . . .	3,815	..	3,815	551	..	551
1968 . . .	2,867	..	2,867	457	..	457
1969 . . .	4,104	..	4,104	398	..	398
1970 . . .	3,275	..	3,275	500	..	500
Rubber—						
1966 . . .	1,538	35,417	36,955	31	5,333	5,364
1967 . . .	2,617	37,043	39,660	23	5,438	5,461
1968 . . .	3,404	35,878	39,282	13	5,711	5,724
1969 . . .	4,222	33,964	38,186	26	5,850	5,876
1970 . . .	5,994	33,958	39,952	28	5,191	5,219
Tea(c)—						
1967 . . .	256	n.a.	n.a.	..	n.a.	n.a.
1968 . . .	359	3,746	4,105	5	68	73
1969 . . .	522	5,270	5,792	41	340	381
1970 . . .	646	6,660	7,306	81	890	971

(a) Non-indigenous figures refer to year ended 31 March, for 1967 and earlier years. (b) Includes all produce acquired by purchase during the year from sources outside the non-indigenous holdings. Excludes amount consumed by growers. (c) No data available for 1966.

### Livestock

Total cattle on non-indigenous holdings at June 1970 was 67,552. Indigenous involvement in the cattle industry is being encouraged. An estimated 8,862 head of cattle were owned by indigenes in 1970. Dairy farming is carried out on a small scale near major towns.

A number of British breeds of cattle are represented, but for best results the use of Zebu cross-bred types of cattle is desirable. For dairying the Jersey seems to be the best breed and adapts quite well to tropical conditions.

A central abattoir controlled by the Administration has been set up at Lae and Administration slaughterhouses at Port Moresby, Goroka and Mount Hagen. There are smaller private slaughterhouses at other centres.

The following table shows the numbers of the various kinds of livestock on non-indigenously occupied holdings in Papua New Guinea at 30 June 1970.

## PAPUA NEW GUINEA: LIVESTOCK NUMBERS, 30 JUNE 1970

(Source: *Rural Industries Bulletin*, 1969-70, Papua New Guinea Bureau of Statistics)

<i>Kind of stock</i>	<i>Papua</i>	<i>New Guinea</i>	<i>Total</i>
Horses . . . . .	353	622	975
Cattle—			
For dairying—			
Cows—in milk . . . . .	370	1,135	1,505
dry . . . . .	393	914	1,307
Heifers, one year and over . . . . .	253	587	840
Heifer calves, under one year . . . . .	236	648	884
Bulls, one year and over . . . . .	53	136	189
Bulls, under one year . . . . .	45	164	209
Total dairying cattle . . . . .	1,350	3,584	4,934
For beef—			
Cows and heifers, one year and over . . . . .	6,669	27,630	34,399
Calves, under one year . . . . .	1,349	5,956	7,305
Bulls, one year and over . . . . .	587	1,452	2,039
Bulls, under one year . . . . .	328	572	900
Other, one year and over . . . . .	3,041	15,034	18,075
Total beef cattle . . . . .	11,974	50,644	62,618
Total all cattle . . . . .	13,324	54,228	67,552
Sheep . . . . .	35	237	272
Pigs—			
Boars . . . . .	89	263	352
Breeding sows . . . . .	413	1,032	1,445
Suckers, weaners, and slips . . . . .	1,366	2,792	4,158
Other . . . . .	58	673	731
Total pigs . . . . .	1,926	4,760	6,686
Goats . . . . .	710	552	1,262
Poultry(a)—			
Fowls . . . . .	(a)	(a)	193,811
Ducks . . . . .	2,401	1,422	3,823
Turkeys . . . . .	49	236	285
Geese . . . . .	62	43	105
Total poultry . . . . .	(a)	(a)	198,024

(a) Only recorded where poultry products are marketed or flocks exceed 100 birds.

## Survey of indigenous agriculture and ancillary surveys, 1961-62

A survey of the agriculture of indigenes of Papua New Guinea was carried out in 1961-62 by the Papua New Guinea Bureau of Statistics in conjunction with the Commonwealth Bureau of Census and Statistics and the Papua New Guinea Department of Agriculture, Stock and Fisheries. A comprehensive report on the surveys was published by the Papua New Guinea Statistician in 1963, and reference should be made to this for further information. A summary of the principal results of the survey appears on pages 1104-10 of Year Book No. 52. Statistics of indigenous cash crop and cattle projects are compiled annually by the Administration's Department of Agriculture, Stock and Fisheries.

## Forestry

Many species of tropical timbers are found in Papua New Guinea, and there is a large pure stand of *Klinkii* pine in the Bulolo Valley. This timber is used mainly for the production of plywood and veneer. The Papua New Guinean forests produce all local timber requirements as well as exports of logs, sawn timber, plywood and veneer. The administration operates a forestry school at Bulolo to train forestry officers, and has established a research centre for forest products at Hohola near Port Moresby as well as regional silvicultural stations and a large herbarium at Lae.

The Administration is making available for public application a number of extensive timber areas estimated to contain a total of about 14,000 million super feet of logs and possibly twice this quantity of pulpwood. It is intended that those areas should form the basis for the development of integrated forest industries, which would be large and economically viable. Feasibility studies have been undertaken by consultants and some interested firms. Subject to negotiation the areas will be allocated on long-term permits. The Administration has acquired from the indigenous peoples timber rights over 4.9 million acres of forest for industrial development. Reforestation of permanently dedicated land is being undertaken by the administration, the area planted to date being 25,423 acres.

At 30 June 1971, 69 permits and 59 licences were current, the total area of forest involved being 851,560 acres. The total number of sawmills was 60 and the total sawn timber produced during 1970-71 was 44.6 million super feet. Total log production was 295 million super feet (true volume) of which 140.7 million was exported.

### Fisheries

Over 1,400 different species of fish are to be found in the coastal and inland waters of Papua New Guinea and many are important food fish. Those of greatest commercial significance are tunas (mainly skipjack), prawns, barramundi, and tropical lobster. Efforts are being made to encourage indigenous fishermen to regard fishing as a source of cash income and not merely as a means of subsistence. This involves the Administration in research and extension work and requires the improvement of refrigeration, transportation and marketing facilities throughout the country. In the Highlands there is increasing interest in fish culture in freshwater ponds.

Commercial fishing for prawns by joint venture companies is increasing and considerable expansion is likely in the tuna fishery, in which three Japanese and one United States of America joint venture companies are at present engaged.

In 1970-71 the main exports of marine produce from Papua New Guinea were 19,802,000 lb of tuna and 811,630 lb of frozen crayfish tails and prawns valued respectively at \$1,317,000 and \$876,000. Exports of cultured pearls amounted to \$867,000. Other important exports are crocodile skins, marine shell and barramundi.

### Mining

A large number of minerals have been found in Papua New Guinea, including platinum, gold, silver, copper, tin, lead, zinc, cinnabar, iron, osmiridium, manganese, sulphur, chromite, gypsum, lignite and brown coal.

A large low grade copper deposit with ore reserves of 900 million tons of ore containing 0.48 per cent copper and 0.36 dwt per ton gold has been developed by Bougainville Copper Pty Ltd, a partly owned subsidiary of Conzinc Rio Tinto Australia Ltd, with a 20 per cent shareholding by the Administration. Production began in 1972 and ore is expected to be mined at the rate of 30 million tons per annum to produce concentrates containing some 150,000 tons of copper, 500,000 oz of gold and 1,000,000 oz of silver for export.

Before the 1939-45 War, gold was an important item in Papuan production, but it has since dwindled to insignificance. Large quantities of copper ore were mined and exported up to 1940. A large low grade copper ore body is being considered for development in the Star Mountains, near the West Irian border. Extensive deposits of magnetite sands exist along the Gulf of Papua coastline, but these contain the undesirable impurity titanium, and ways of separating this from magnetite are under investigation. The production of gold in New Guinea decreased from \$1,414,238 in 1959-60 to \$792,290 in 1971-72, but will increase greatly in 1972-73.

The laws in operation governing mining are the *Mining Ordinance* 1928-1966, the *Mines and Works Regulation Ordinance* 1935-1962 and the *Mining Development Ordinance* 1955-1960 and the regulations made thereunder.

Indications of oil have been found at scattered locations over a large area, but commercial quantities have not been discovered. Natural gas has been found in several wells in the Gulf District (including offshore), but its commercial use is not yet economically feasible.

At 30 June 1972, 36 permits and licences were effective under the provision of the *Petroleum (Prospecting and Mining) Ordinance* 1951-1968 and the *(Commonwealth) Petroleum (Submerged Lands) Act* 1967-1968.



### Secondary industries

The major manufacturing industries are generally those processing primary products, mainly for exports. Examples of these are plywood, coconut oil, copra by-products, desiccated coconut and pyrethrum.

Nevertheless industries catering for the rapidly expanding local market remain numerically predominant. These include the brewing of beer, furniture making and assembly of electrical appliances; the production of cigarettes and twist tobacco, aerated waters, clothing, plastic articles, concrete products, glass bottles, drums, industrial gases, chemicals, fibreglass products, nails and other wire products, packaging and paper products, paints, metal louvre frames, wood preservative, metal roofing, water heaters, cast-iron stoves and other building materials, tyre repairs, fire protection equipment, agricultural machinery, matches, printing and ship-building.

A wide variety of services has also been established such as engineering workshops, plumbing establishments, motor repairs and electrical services.

#### PAPUA NEW GUINEA: SUMMARY OF FACTORY OPERATIONS 1968-69 AND 1969-70

(Source: *Secondary Industries Bulletin* 1969-70, Papua New Guinea Bureau of Statistics)

	Papua		New Guinea		Total	
	1968-69	1969-70	1968-69	1969-70	1968-69	1969-70
Number of factories(a)	203	234	406	435	609	669
Average number employed(b)	4,261	4,658	9,026	9,181	13,287	13,839
Salaries and wages paid(c)	\$'000 5,218	5,847	8,798	10,143	14,016	15,990
Value of power, fuel, light, etc., used(d)	484	531	1,322	1,532	1,806	2,053
Value of materials used(e)	9,148	10,997	29,234	33,254	38,382	44,251
Value of production(f)	11,937	14,093	23,106	25,346	35,043	34,939
Value of output(g)	21,569	25,621	53,661	60,623	75,231	86,244
Value of land and buildings(h)	7,960	9,667	11,891	13,188	19,852	22,855
Value of plant and machinery(h)	13,391	13,418	10,814	12,120	24,206	25,538

(a) Any factory, workshop or mill in which four or more persons are employed or power other than hand is used.  
 (b) Average weekly employment including working proprietors. (c) Excludes drawings by working proprietors.  
 (d) Includes water and lubricating oil. (e) Includes value of containers, packing, etc., tools replaced, and repairs to plant.  
 (f) Value added in process of manufacture (i.e. value of output less value of materials and power, fuel, etc. used).  
 (g) Value of goods produced including amounts received for repair work and other work done. (h) Depreciated or book value at end of year, including estimated value of rented premises and machinery.

#### PAPUA NEW GUINEA: FACTORY OPERATIONS BY CLASS OF INDUSTRY, 1969-70

(Source: *Secondary Industries Bulletin* 1969-70, Papua New Guinea Bureau of Statistics)

	Class of industry				Total
	Industrial metals machines and conveyances	Food, drink and tobacco	Sawmills, plywood and joinery	Other industries	
Number of factories	328	100	153	88	669
Number of employees—					
Non-indigenous	n.a.	n.a.	n.a.	n.a.	2,464
Indigenous	n.a.	n.a.	n.a.	n.a.	11,375
Total employees	4,858	3,304	3,958	1,719	13,839
Salaries and wages paid	\$'000 8,540	2,217	3,111	2,122	15,900
Value of power, fuel and light, etc.	386	625	346	670	2,053
Value of materials used	12,018	15,032	6,976	10,255	44,251
Value of production	14,919	9,315	8,104	7,600	34,939
Value of output	27,323	24,972	15,426	18,522	86,244

See footnotes to previous table.

NOTE. Electricity generation is included in 'Other industries'.

## Electric power generation and distribution

### Electric power generation and distribution

*Papua and New Guinea Electricity Commission.* Responsibility for the operation and establishment of the electrical undertakings in Papua New Guinea is vested in the Papua New Guinea Electricity Commission, whose headquarters are located at Port Moresby. The Papua and New Guinea Electricity Commission was established by the *Papua and New Guinea Electricity Commission Ordinance* 1961-1969, and on 1 July 1963 acquired the assets of the Electrical undertakings Branch of the Department of Public Works. In Papua New Guinea, the Commission owns and operates major stations at Port Moresby, Lae, Rabaul, Madang, Wewak, Goroka, Kavieng and Samarai. It also maintains, operates and carries out administrative functions at Mount Hagen, Kundiawa and Kainantu and will carry out similar work in several of the faster growing 'minor' centres in the near future. In addition, it has also regulatory functions associated with the licensing of electricians and contractors, the control of franchise holders, the approval of appliances and electrical materials for use in the Territory, and operates showrooms at major centres for the purpose of selling electrical appliances.

*Generating facilities.* Except for Port Moresby and Goroka, where the Commission owns and operates hydro-electric generating facilities, supply is from diesel stations. In Lae, the Commission purchases power in bulk from Placer Development at Bulolo where there are privately-owned hydro stations. The installed capacity of plant in the Commission-owned centres at 1 April 1972 was as follows.

<i>Centre</i>	<i>kW</i>
Port Moresby . . . . .	(a)35,500
Lae . . . . .	(b)9,840
Rabaul . . . . .	5,360
Madang . . . . .	5,120
Goroka . . . . .	(c)2,786
Wewak . . . . .	2,300
Kavieng . . . . .	450
Samarai . . . . .	440
<b>Total . . . . .</b>	<b>61,796</b>

(a) All hydro. (b) Lae supply is supplemented by power purchased in bulk from Placer Development at Bulolo. (c) Includes 600 kW hydro.

The total substation capacity of all the Commission systems combined amounts to approximately 99,985 kVA divided up among 639 stations. The number of consumers served by the Commission at 1 April 1972 was 20,496.

The Commission also maintains the generating plant and distribution systems in all minor centres acting as an agent of, and from funds provided by, the Administration. The installed capacity of the 135 Administration-owned power stations at 1 April 1972 was 8,900 kW. The township of Wau and Bulolo are supplied exclusively with power generated by Placer Development Ltd.

The demand for power throughout Papua New Guinea continues to increase. In Port Moresby, contracts have been let for the construction of Rouna No. 3 station to be built alongside the existing Rouna No. 1 Station. The new station will contain two 6 MW sets and will boost the city's available power capacity to 47.5 MW. Preliminary plans have also been drawn up for a Rouna No. 4 station, again of 12 MW, to be constructed further down-stream from Rouna Nos. 1 and 3. In Lae, Madang and Goroka new diesel sets were installed during the present financial year, and at Goroka a small hydro set was recently installed and is currently undergoing acceptance tests.

Contracts have been let for the design and manufacture of three 15 MW hydro-electric sets for the Upper Ramu Hydro-electric Scheme and for two 6 MW sets for Rouna No. 3 station in Port Moresby.

Orders have been placed for the following diesel generating sets.

Lae—two 3200 kW Fuji sets.

Madang—a second 1500 kW Niigata set.

Goroka—three 600 kW sets.

Kerevat—two 600 kW sets will be installed in the Power Station. This station will be taken over by the Commission in October 1972.

*Future development.* The development of the first stage of the Upper Ramu Hydro-electric Scheme will consist of an underground power station containing three 15 MW generators and is expected to be in operation by July 1975. It will supply the towns of Lae, Madang, Goroka, Mount Hagen and small centres of the Eastern Highlands. Investigations will shortly commence for the construction of Yonki Dam and Ramu Stage 2, which includes the installation of two 15 MW generators. The estimated total cost of the project including the installation of 320 miles of transmission lines is \$48.6 million.

The Commission is proceeding with the design of Rouna No. 3 station on the Laloki River alongside Rouna No. 1 station and construction will commence in late 1972. The station will contain two 6 MW sets and it is planned to begin operation in July 1974.

The Commission is also investigating other power developments for Port Moresby. These include Rouna No. 4 power station of 12 MW, Musa River Hydro-electric Scheme of about 400 MW which will become part of an interconnection system with the Upper Ramu Scheme, a diesel station at Baruni near Port Moresby, and Sogeri Pond on the Laloki River.

In Rabaul the power station which was to have been constructed at Kabaira Bay has been unavoidably delayed because of native land problems and it will be reviewed in 1973. The installation of two additional 600 kW sets at Kerevat Power Station and the construction of a transmission line between Kerevat and Rabaul will supplement the town's supply.

### Trade, transport and communication

#### Value of imports and exports

#### PAPUA NEW GUINEA: IMPORTS AND EXPORTS, 1966-67 TO 1970-71 (\$A'000)

(Source: Overseas Trade Statistics, Papua New Guinea Bureau of Statistics)

	1966-67	1967-68	1968-69	1969-70	1970-71
Total imports(a) . . . . .	127,379	(b)145,303	150,455	213,051	254,599
Exports—					
Domestic exports . . . . .	46,113	59,089	64,896	71,443	77,447
Re-exports . . . . .	7,107	11,161	10,348	22,117	24,485
Total exports . . . . .	53,220	70,250	75,244	93,560	101,932

(a) Includes value of outside packages. (b) Includes floating oil rig valued at \$8 million, re-exported in July 1969.

#### Country of origin or destination

#### PAPUA NEW GUINEA: COUNTRY OF ORIGIN OF IMPORTS, 1966-67 TO 1970-71 (\$A'000 f.o.b. port of shipment)

(Source: Overseas Trade Statistics, Papua New Guinea Bureau of Statistics)

Country of origin	1966-67	1967-68	1968-69	1969-70	1970-71
Australia . . . . .	71,160	78,108	82,165	114,332	130,395
Canada . . . . .	736	852	1,162	3,012	2,066
Ceylon . . . . .	320	366	341	342	329
China (mainland) . . . . .	2,257	1,715	2,758	2,254	2,201
France . . . . .	573	825	1,402	1,668	1,031
Germany, Federal Republic of . . . . .	2,687	2,739	3,448	3,933	3,893
Hong Kong . . . . .	4,306	4,583	4,760	5,654	7,542
Italy . . . . .	363	1,449	746	1,122	895
Japan . . . . .	13,073	14,448	17,849	26,393	42,650
Malaysia and Singapore . . . . .	3,471	3,874	4,357	5,692	6,685
Netherlands . . . . .	4,468	880	913	2,046	2,795
New Zealand . . . . .	249	77	841	2,618	2,727
Sweden . . . . .	455	480	610	613	640
United Kingdom . . . . .	7,141	7,213	8,574	12,347	9,823
United States of America . . . . .	7,804	(a)19,613	11,589	22,556	29,585
Other countries . . . . .	8,314	8,081	8,940	8,469	10,342
Total . . . . .	127,379	145,304	150,455	213,051	254,599

(a) Includes floating oil rig valued at \$8 million.

## PAPUA NEW GUINEA: COUNTRY OF DESTINATION OF EXPORTS, 1966-67 TO 1970-71

(\$A'000 f.o.b. port of shipment)

(Source: Overseas Trade Statistics, Papua New Guinea Bureau of Statistics)

Country of destination	1966-67	1967-68	1968-69	1969-70	1970-71
Australia . . . . .	24,857	29,288	29,548	41,295	43,373
Germany, Federal Republic of . . . . .	3,030	4,656	8,403	7,549	5,377
Japan . . . . .	2,794	4,652	3,732	8,560	11,813
Netherlands . . . . .	1,192	2,194	3,869	4,303	2,066
United Kingdom . . . . .	14,543	20,279	18,769	15,394	19,567
United States of America . . . . .	3,311	5,403	5,662	11,076	13,337
Other countries . . . . .	3,493	3,778	5,261	5,383	6,399
<b>Total . . . . .</b>	<b>53,220</b>	<b>70,250</b>	<b>75,244</b>	<b>93,560</b>	<b>101,932</b>

## Principal commodities exported

## PAPUA NEW GUINEA: PRINCIPAL DOMESTIC EXPORTS, 1966-67 TO 1970-71

(\$A'000 f.o.b. port of shipment)

(Source: Overseas Trade Statistics, Papua New Guinea Bureau of Statistics)

Commodity	1966-67	1967-68	1968-69	1969-70	1970-71
Copra . . . . .	9,994	13,943	14,804	13,340	14,209
Other coconut products(a) . . . . .	5,840	7,405	6,361	7,619	9,901
Coffee beans . . . . .	10,208	14,320	15,531	20,182	20,572
Cocoa beans . . . . .	9,545	11,794	16,060	15,549	13,643
Timber(b) . . . . .	2,264	2,662	2,296	3,796	6,401
Plywood(c) . . . . .	2,167	2,429	2,504	2,529	2,505
Rubber(d) . . . . .	3,481	1,956	2,276	2,798	2,297
Gold . . . . .	914	825	807	824	720
Crayfish and prawns . . . . .	33	978	268	659	875
Crocodile skins . . . . .	737	509	473	452	264
Peanuts . . . . .	521	430	469	550	518
Pyrethrum extract . . . . .	390	417	313	332	286
Passionfruit juice . . . . .	112	202	122	131	1
Tea . . . . .	3	42	297	645	1,094
Other . . . . .	904	1,177	2,315	2,037	4,161
<b>Total . . . . .</b>	<b>46,113</b>	<b>59,089</b>	<b>64,896</b>	<b>71,443</b>	<b>77,447</b>

(a) Dessicated coconut, copra oil and copra pellets.  
vener.

(b) Logs and sawn timber.

(c) Plywood, veneer and battery

(d) Raw and scrap rubber.

## Shipping

In 1970-71 shipping entries (excluding coastal shipping and cargoes) at Papua New Guinea ports totalled 2,019, and 1,498,000 tons of cargo were discharged and 865,000 tons were loaded. Corresponding figures for 1969-70 were 1,903, 1,289,000 and 623,000 respectively.

Regular passenger and freight services operate between Australia and Papua New Guinea. Vessels trading between Australia and the East also call at Papua New Guinea ports, and there are services from continental and United Kingdom ports. Coastal and inter-island shipping services are maintained by vessels operating from the principal ports of the country.

## Other forms of transport and communication

Scheduled flights provide a network of air transport throughout Papua New Guinea and regular air services link the country with Australia and neighbouring Territories, also with Manila, Hong Kong, Honiara and Jaipura. There were 418 licensed aerodromes in the whole of Papua New Guinea at 30 June 1971, and of these 12 were the responsibility of the Department of Civil Aviation, 136 are Administration owned commercial airfields, 81 are privately (i.e. not Administration) owned commercial airfields and 189 are restricted airfields either Administration or privately owned. Much of the internal traffic and freight is carried on a charter basis.



At January 1972 there were 10,117 miles of roads in the country. Total motor vehicle registrations (excluding defence force vehicles) at 31 December 1971 were 38,163.

Telephone services operate between the main centres by radio telephone. These together with telex and telegraph services are operated within the country by the Department of Posts and Telegraphs, while overseas traffic is handled by the Overseas Telecommunications Commission. The Australian Broadcasting Commission broadcasts on medium wave and short wave from Port Moresby and Rabaul. The Administration Department of Information and Extension Services operates transmitters at a number of centres, broadcasting programmes in several local languages.

### Indigenous labour

At 30 June 1970 there were approximately 305,000 Papua New Guineans wholly or mainly engaged in the money-raising work force, of whom 177,945 were wage and salary earners.

Minimum wages and conditions of employment for Papua New Guinean workers are prescribed by statute under the *Native Employment Ordinance* 1958-1971, and the *Public Service (Papua and New Guinea) Ordinance* 1964-1971, and are determined by the Minimum Wages Board under the *Industrial Relations (Minimum Wages Board) Ordinance* 1971. Conditions of employment and wage rates are also prescribed by awards negotiated by agreement between organisations of employers and employees and by determinations of arbitral tribunals established under the *Industrial Relations Ordinance* 1962-1971 and the *Public Services Conciliation and Arbitration Ordinance* 1969-1970.

The minimum statutory wage for an unskilled worker is \$5.90 a week. Where a worker is provided with accommodation, food, clothing and other issues, deductions may be made from the cash wage by agreement between employer and employee up to legally prescribed limits. The maximum permissible deductions for accommodation and food are 87 cents and \$2.50 a week respectively.

General employment agreements are in force in Lae, Goroka, Mount Hagen, Madang, Wewak, Vanimo, Kavieng, Rabaul, Lorengau, Daru, Popondetta, Samarai-Alotau-Bwagaoia and Port Moresby. These agreements apply to all workers employed by members of the Employers' Federation regardless of whether or not they are members of a Workers' Organisation (other than those employees directly engaged in primary production, domestic duties, stevedoring operations or in shipping services). In many of the above centres or localities the agreements are applied to all workers engaged not only by members of the Employers' Federation but also by employers who are not members of the Federation due to common rules being declared. The agreements cover annual and sick leave entitlements and rates of pay and conditions of employment for workers in those areas. In all cases the agreements are negotiated between the Employers' Federation of Papua New Guinea and the local workers' association or union.

In addition to agreements applying to workers in particular localities there are also awards which apply to workers in particular industries, e.g. stevedoring, timber, building and construction and mining.

The minimum wage rates for adult unskilled workers in industries and locations covered by awards and agreements range between \$6.50 and \$8.00 a week. Margins for skill are prescribed for semi-skilled and skilled workers ranging up to about \$30 a week.

The *Industrial Organizations Ordinance* 1962-1970 provides for the registration and control of industrial organisations. At 30 June 1972 there were thirty-six registered employees' organisations in Papua New Guinea with a total membership of 30,478 workers, including 25,825 Papua New Guineans. Nine of the above employee organisations have joined together to form the Federation of Workers' Associations of Papua New Guinea which was registered on 4 March 1970. There was one employers' organisation registered under the *Industrial Organisations Ordinance*.

The Bureau of Industrial Organisations was established under Statute on 23 March 1972 and the board of management held its inaugural meeting on 29 May 1972. The functions of the Bureau are to encourage and assist the formation and development of industrial organisations of employers and employees.

The Papua New Guinea Labour Advisory Council advises the Administrator's Executive Council and the Government on labour matters generally, and in particular on:

- methods of improving industrial relations,
- measures needed to achieve full and efficient use of the country's manpower,
- methods of bringing about rapid localisation of the work force in the private sector and incentives and other measures to achieve this end,
- measures to improve productivity, and
- trade union development.

By December 1971, 1,137 Papua New Guinean apprentices had completed their training. There were 1,514 indigenous apprentices indentured under the Apprenticeship Ordinance training in thirty-six trades. The public sector was responsible for 807 indentures and the private sector for 707. At the same date 52 non-indigenous apprentices were indentured. Outputs of qualified artisans from the apprenticeship scheme have increased from 137 in 1969 to 326 for the year ending 30 June 1971.

## Housing

Village housing is constructed to traditional patterns using local materials including bush timber, bamboo, grass, pit-pit and sago palm leaves. Town housing is generally constructed from comparatively expensive imported material including fibrous asbestos cement, aluminium and galvanised iron. The majority of houses are timber framed and made from both locally milled and imported timber.

The rapid growth of urban areas consequent upon increased economic development has created a housing shortage. Major programmes are directed towards reducing this shortage.

The Housing Commission was established in 1968, with charter to construct housing and accommodation for all sections of the community. The intention is for the Commission to progressively assume responsibility for all Administration houses in its areas of operation. The Commission currently operates in Port Moresby, Lae, Madang, Rabaul and Goroka.

The major urban centres in Papua New Guinea have squatter settlement problems. Squatter houses are mostly of the substandard shanty type. The Administration and the Housing Commission are assisting squatters with self-help housing schemes in both existing squatter settlements and new resettlement areas by providing housing allotments, supervisory staff, building materials at cost price, and basic services. Self-help housing schemes are to be expanded significantly over the next five years, particularly in the major urban centres.

## Education and health

### Education

Schools in Papua New Guinea are conducted by the Administration and various Christian missions. In February 1970 the Australian Government adopted the recommendations of the Advisory Committee on Education in Papua New Guinea, and the House of Assembly subsequently passed the *Education (Papua New Guinea) Ordinance, 1970* and the *Teaching Service (Temporary Provisions) Ordinance 1970*. The new legislation provided for the voluntary merger as from 1 July 1970 of mission schools and colleges and teaching staff, with those of the Administration, into a unified National Education System and a single National Teaching Service. A representative National Education Board and a number of District Education Boards were created to advise on educational planning and administration at the national and district levels respectively. A Teaching Service Commission was also created to employ teachers and to determine their salaries and conditions of service.

At 30 June 1971 there were 216,528 children enrolled in 1,503 primary schools in the Papua New Guinea national education system; and a further 24,404 enrolled in 135 secondary technical and vocational schools. Some 6,000 of the 8,000 teachers employed in schools were Papua New Guineans. Teachers are recruited from Australia and overseas and some are trained at the Canberra College of Advanced Education, and in 11 teachers' colleges in Papua New Guinea conducted by the missions and the Administration.

At the post-secondary and tertiary level of education, as well as the University of Papua New Guinea and the Institute of Technology, there are a range of specialised institutions operated by Administration and Commonwealth Departments, including technical and teachers' colleges. Vudal Agricultural College, Bulolo Forestry School, a police training college, a dental college and others. The University of Papua New Guinea has faculties of Arts, Law, Science, Education and Medicine. In 1971 there were 1,032 students enrolled in degree and post graduate courses, of whom 578 were Papua New Guineans. At May 1972, 99 students had graduated from the University, of whom 50 were Papua New Guineans. The Papua New Guinea Institute of Technology conducts diploma courses in civil, electrical and mechanical engineering, surveying, architecture and building technology, accountancy and business studies and in 1971 there were 326 enrolments of whom approximately 10 were expatriates. At May 1972 twenty-two students had graduated, of whom all but one were Papua New Guineans.

*School of Pacific Administration.* In November 1971, the Commonwealth Government decided that the Australian School of Pacific Administration at Mosman, Sydney, would be developed as an important centre for training Papua New Guineans.

In its new role, the School is supplementing training and undertaking specially structured training which cannot be better or more conveniently provided in Papua New Guinea or elsewhere in Australia. The School is concentrating on administrative and specialised training to prepare Papua New Guinean Public Servants.

The School's programme provided for over 150 Papua New Guineans to attend courses during 1972. Of this number, 90 have undertaken vocationally oriented courses of 8 months duration to upgrade their qualifications for advancement within the Papua New Guinea Public Service. The balance of trainees undertook shorter courses in advanced administrative and executive development training, industrial relations and local government practice.

### Health

The Department of Public Health of Papua New Guinea has the general oversight of all medical and dental services. The Department has the following seven functional divisions: medical services, preventive medicine, medical training, maternal and child health, dental education, administrative services, and mental health. To facilitate administration and co-ordination of the field services of the Department of Public Health, Papua New Guinea is divided into four geographical regions: the New Guinea Mainland, Highlands, New Guinea Islands Region and Papua.

## Finance

### Revenue and expenditure

#### PAPUA NEW GUINEA: REVENUE AND EXPENDITURE, 1967-68 TO 1971-72 (\$'000)

	1967-68	1968-69	1969-70	1970-71	1971-72
REVENUE					
Customs . . . . .	16,555	17,669	23,951	30,960	33,135
Licences . . . . .	738	814	907	1,038	1,440
Stamp duties . . . . .	508	553	870	683	964
Postal . . . . .	3,543	4,682	5,289	(a)	(a)
Land revenue . . . . .	748	832	1,102	1,098	1,200
Mining receipts . . . . .	47	72	116	241	153
Fees and fines . . . . .	283	364	459	567	647
Health revenue . . . . .	317	352	464	676	725
Forests . . . . .	640	547	684	923	938
Agriculture . . . . .	1,087	1,015	1,011	1,021	1,053
Public utilities . . . . .	905	1,173	1,273	1,653	1,791
Direct taxation . . . . .	15,904	17,187	21,075	29,375	36,117
Miscellaneous . . . . .	5,397	4,614	5,381	5,653	6,708
Recoverable services . . . . .	3,229	5,264	9,862	9,478	10,382
<i>Total internal revenue . . . . .</i>	<i>49,900</i>	<i>(b)55,137</i>	<i>(b)72,442</i>	<i>(b)83,366</i>	<i>(b)95,253</i>
Papua New Guinea loans . . . . .	8,397	7,183	(c)6,736	(c)11,986	25,540
Grant by Commonwealth of Australia . . . . .	77,594	87,271	97,271	(d)70,000	(d)69,875
International loans . . . . .	..	51	1,384	2,620	8,131
Commonwealth loans . . . . .	..	..	5,000	6,600	11,700
Special Loan—Purchase of Equity in Bougainville Copper Ltd . . . . .	..	..	12,500	12,500	..
Consolidated revenue . . . . .	..	..	344	203	..
<i>Total revenue . . . . .</i>	<i>135,892</i>	<i>149,642</i>	<i>195,677</i>	<i>187,275</i>	<i>210,499</i>

For footnotes see end of table next page.



PAPUA NEW GUINEA: REVENUE AND EXPENDITURE, 1967-68 TO 1971-72—*continued*  
(\\$'000)

	1967-68	1968-69	1969-70	1970-71	1971-72
EXPENDITURE					
Special appropriations . . . . .	2,785	5,734	(c)5,567	(c)9,694	13,943
Administrator . . . . .	1,329	1,327	9,278	6,491	8,056
House of Assembly . . . . .	420	291	383	409	377
Information and extension services . . . . .	1,001	1,187	1,239	1,171	1,600
Public Service Board . . . . .	1,270	1,550	1,838	1,155	1,367
Treasury . . . . .	11,576	11,623	3,313	4,928	3,948
Public health . . . . .	11,124	12,217	14,255	13,231	14,491
Social development and home affairs(e) . . . . .	..	..	6,953	5,297	6,911
District administration(f) . . . . .	6,012	6,570	..	..	..
Labour . . . . .	632	778	957	741	880
Education . . . . .	15,062	17,214	21,204	17,939	20,758
Agriculture, stock and fisheries . . . . .	6,427	7,492	8,751	7,209	7,983
Royal Papua New Guinea Constabulary . . . . .	6,143	6,671	7,965	7,689	7,908
Law . . . . .	2,545	2,930	4,009	3,705	4,556
Lands, surveys and mines . . . . .	3,177	3,270	5,321	4,780	4,398
Forests . . . . .	2,369	2,469	2,677	2,082	2,367
Posts and telegraphs . . . . .	4,750	5,688	7,661	6,774	6,519
Trade and industry . . . . .	2,607	2,826	3,243	817	647
Transport(g) . . . . .	..	..	..	2,504	2,984
Business development(h) . . . . .	..	..	..	377	865
Stores for resale . . . . .	1,474	1,625	5,677	5,368	6,410
Public works . . . . .	5,740	7,115	8,105	5,564	5,677
General overheads . . . . .	2,291	2,241	2,745	2,540	2,817
Maintenance . . . . .	10,581	12,217	14,046	15,698	17,040
Capital works . . . . .	22,503	21,379	28,215	29,675	40,000
Other institutions . . . . .	8,623	11,498	15,474	15,022	23,046
Motor transport . . . . .	2,792	3,214	3,555	3,482	3,659
Government printer . . . . .	312	361	446	417	538
Purchase of investments—Bougainville Copper Ltd . . . . .	..	..	12,500	12,500	..
Total(i) . . . . .	133,547	149,485	195,377	187,259	209,745

(a) Postal Revenue is retained by the Department of Posts and Telegraphs in accordance with the change to commercial accounting for that Department. (b) From 1 July 1968 refunds of revenue have been deducted from gross collections by items. (c) The Budget figure for Papua New Guinea Loans and Special Appropriations is reduced by \$8.9 million in 1969-70 and by \$3.6 million in 1970-71 as these amounts were incurred and repaid during each of those years; the Budget shows these additional amounts for book-keeping purposes. (d) In addition, amounts of \$31.5 million and \$38.5 million were provided in 1970-71 and 1971-72 respectively by the Commonwealth towards the cost of allowances and salaries of expatriate officers of the Papua New Guinea Public Service, and these amounts are not included in the Papua New Guinea Budget. (e) New department established 1969-70; includes former sections of the Department of the Administrator, Department of the Treasury and the former Department of District Administration. (f) Abolished in 1969-70—functions taken over by the Department of the Administrator and the Department of Social Development and Home Affairs. (g) New Department established in 1971 from former sections of Departments of the Administrator, Treasury and Trade and Industry. (h) New Department established in 1970-71 which includes former sections of Department of Trade and Industry. (i) Amount reduced by taxation refunds and refunds of revenue.

### Taxation

The main forms of taxation are income tax and import duties. *Income Tax* was imposed on 1 August 1959 to operate from 1 July 1959. In the case of individuals two different methods of calculating tax payable are used. Tax on taxable incomes has applied since 1 July 1959 and is calculated on a similar basis to that in Australia. Income Tax is about two thirds of the tax payable on the same taxable income in Australia. Tax on chargeable income was introduced to apply from 1 January 1967 and has supplanted a previous *Personal Tax* of \$4 payable by all males eighteen years and over. Chargeable income consists of gross income less expenses directly incurred in earning the income. No deductions are allowable for dependants or any other private expenditure such as medical or education expenses. The tax is a flat rate of 2.00 cents in the \$1 applying on income above \$416 with a maximum of \$20.00. The two methods of calculating tax payable are supplementary, the method applied to any particular taxpayer being the one resulting in the greater amount of tax payable. Companies are taxed on a similar basis to that in Australia, and deductions allowable are generally comparable to those in Australia. From 1 July 1959 to 30 June 1967 the rates on public and private companies differed, public companies being taxed at a flat rate of 20 cents in the \$1 and private companies at 12.5 cents in the \$1 for the first \$10,000 and 17.5 cents in the \$1 for the remainder. From 1 July 1971 a flat rate of 25 cents in the \$1 applies to all companies, and from the same date



private companies are no longer required to distribute a portion of their income in dividends each year. To encourage industry in Papua New Guinea certain companies manufacturing products new to Papua New Guinea may be granted complete tax exemption for the first five years of operation under the *Industrial Development (Incentive to Pioneer Industries) Ordinance* 1965-1969. In addition to income taxes the Native Local Government Councils (which are formed voluntarily by the indigenes) are empowered to levy local taxes for the purpose of providing for local services carried out by the councils. These taxes are set off against the taxpayers' personal taxation.

Papua New Guinea has a single column tariff applying to all goods regardless of country of origin. The present *Customs Tariff* provides high revenue rates on imports of ale, spirits, tobacco and cigarettes, timepieces, cigarette papers, fancy goods, and jewellery, but allows entry duty free or at a low rate of duty on most necessities affecting living and building costs. Under the Customs Tariff, plant, machinery and chemicals to be used mainly for industrial and developmental purposes are generally duty-free. A by-law covers goods imported by passengers. No preferential rates are specified in the schedule. Export duties imposed on copra, cocoa, rubber, mother-of-pearl, trochus and burgos shell, and gold were repealed in July 1959.

Provision is made in the *Australian Customs Tariff* for the free entry into Australia of certain goods produced in and imported direct from Papua New Guinea (see Chapter Overseas Transactions). In addition, goods produced or manufactured in Papua New Guinea and imported directly into Australia are exempted from primage duty.

Effective from 2 September 1970, a general levy of 2½ per cent was imposed, subject to certain exemptions on all goods imported into Papua New Guinea. Exemptions apply in the main to goods imported by the Administration and/or the Australian Government and their statutory authorities, goods imported for the use of charitable organisations and goods used for educational, health or medical services or for scientific research.

This levy, although administered by the Comptroller of Customs is not a Customs Duty and does not affect rates of duty imposed under the Customs Tariff.

### Banking

The banking system in Papua New Guinea is based on Australia's, and provides full trading and savings bank facilities. Four Australian trading banks have branches in the main centres. They are: the Commonwealth Trading Bank of Australia, the Bank of New South Wales, Australia and New Zealand Banking Group and the National Bank of Australasia Ltd. Affiliates or subsidiaries of banking institutions operate savings banks in the Territory. Rates of interest for bank deposits and advances are the same as those applying in Australia. A branch of the Reserve Bank of Australia in Port Moresby carries out central bank functions and acts as banker for the Administration and Commonwealth Government Departments in the Territory. The Territory uses the same currency as Australia.

The Banking (Foreign Exchange) Regulations of the Commonwealth of Australia apply to Papua New Guinea. The Regulations are administered by the Reserve Bank of Australia in a way that is consistent with the policy of encouraging overseas investment in Australia and Papua New Guinea. All remittances abroad require exchange control approval, though in practice no restrictions are imposed on current transactions and the trading banks have been authorised to deal with the great majority of these transactions as agents of the Reserve Bank.

Average weekly deposits of cheque-paying banks in Papua New Guinea for the year 1970-71 were \$49,948,000 and loans, advances, including term loans and farm development loans, \$64,163,000. Average weekly debits to customers' accounts amounted to \$31,002,000. Savings banks depositors' balances at 30 June 1971 amounted to \$44,790,000, comprising indigenous \$17,508,000 and non-indigenous \$27,282,000 having increased since June 1961 from \$2,999,000 and \$9,663,000 respectively.

The Papua New Guinea Development Bank was established in 1967 to provide finance for primary production, manufacturing and commerce. In early 1972 the Papua New Guinea Investment Corporation was established to acquire equity interests in major enterprises in Papua New Guinea for disposal to Papua New Guinea institutions and individuals.

### Co-operative societies

Co-operatives are under the guidance of the Department of Business Development. The present structure of the co-operative movement is based on primary societies, associations of societies, regional unions and a Territory-wide Federation formed by the unions. At 31 March 1971 there were 340 primary societies with 139,000 members. Turnover exceeded \$7 million including \$5 million from produce. In addition there are service organisations for wholesale trade, insurance and shipping. A Co-operative College is being set up near Port Moresby with United Nations Development Programme and International Labour Organisation assistance. The first buildings were opened in May 1971.

## HEARD ISLAND AND McDONALD ISLANDS

These islands, about 2,500 miles south-west of Fremantle, were transferred from the United Kingdom to Australia as from 26 December 1947. The laws of the Australian Capital Territory were declared to be in force in the Territory of Heard Island and McDonald Islands by the *Heard and McDonald Islands Act* 1953. In 1968, the responsibility for the administration of this Act was transferred from the Minister for External Affairs to the Minister for Supply.

In December 1947 an Australian scientific station was established on Heard Island, and meteorological investigations were conducted until the station was closed in March 1955 following the establishment of Mawson station on the Antarctic mainland. Australian expeditions have since visited the island from time to time. Heard Island is about twenty-seven miles long and thirteen miles wide. The McDonald Islands are twenty-six miles to the west of Heard Island. They are small, rocky and precipitous. The first known landing on McDonald Island, the largest of the group of the same name, took place on 27 January 1971 when two members of the Australian National Antarctic Research Expeditions (ANARE) paid a short visit on their way to the Heard Island Station.

## AUSTRALIAN ANTARCTIC TERRITORY

An Imperial Order in Council of 7 February 1933 placed under Australian authority all the islands and territories other than Terre Adélie situated south of 60° S. latitude and lying between 160° E. longitude and 45° E. longitude. The Order came into force with a Proclamation issued by the Governor-General on 24 August 1936 after the passage of the *Australian Antarctic Territory Acceptance Act* 1933. The boundaries of Terre Adélie were definitively fixed by a French Decree of 1 April 1938 as the islands and territories south of 60° S. latitude lying between 136° E. longitude and 142° E. longitude. The *Australian Antarctic Territory Act* 1954 declared that the laws in force in the Australian Capital Territory, are so far as they are applicable and are not inconsistent with any ordinance made under the Act, in force in the Australian Antarctic Territory. In 1968, responsibility for the administration of this Act was transferred from the Minister for External Affairs to the Minister for Supply.

On 13 February 1954 the Australian National Antarctic Research Expeditions (ANARE) established a station on Mac-Robertson Land at latitude 67° 36' S. and longitude 62° 53' E. The Station was named Mawson in honour of the late Sir Douglas Mawson and was the first permanent Australian station to be set up on the Antarctic continent. Meteorological and other scientific research is conducted at Mawson, which is the centre for coastal and inland survey expeditions.

A second Australian scientific research station was established on the coast of Princess Elizabeth Land on 13 January 1957 at latitude 68° 35' S. and longitude 77° 58' E. The station was named in honour of Captain John King Davis, second in command of two of Mawson's expeditions and master of several famous Antarctic ships. The station was temporarily closed on 25 January 1965 and reopened on 15 February 1969. On 4 February 1959 the Australian Government accepted from the United States Government custody of Wilkes Station, which was established by the United States on 16 January 1957 on Vincennes Bay at latitude 66° 15' S. and longitude 110° 32' E. The station was named in honour of Lieutenant Charles Wilkes who commanded the 1838-42 United States expedition to the area. The station was closed on 19 February 1969 when activities were transferred to Casey Station built about 1½ miles south of Wilkes. Casey Station, which was opened on 19 February 1969, was named in honour of Baron Casey, former Governor-General of Australia, in recognition of his long association with Australia's Antarctic effort.

On 1 December 1959 Australia signed the Antarctic Treaty with Argentina, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, the U.S.S.R., the United Kingdom, and the United States of America, Poland, Czechoslovakia, Denmark, the Netherlands and Romania have subsequently acceded to the Treaty. The Treaty reserves the Antarctic area south of 60° S. latitude for peaceful purposes, provides for international co-operation in scientific investigation and research, and preserves, for the duration of the Treaty, the *status quo* with regard to territorial sovereignty, rights and claims. The Treaty entered into force on 23 June 1961. Since then the Antarctic Treaty powers have held six consultative meetings under the Treaty, the first at Canberra in July 1961, the second at Buenos Aires in July 1962, the third at Brussels in June 1964, the fourth at Santiago in 1966, the fifth in Paris in 1968 and the sixth in Tokyo 1970. The seventh is to be held in Wellington in 1972.

## COCOS (KEELING) ISLANDS

### General description

The Cocos (Keeling) Islands, two separate atolls comprising some twenty-seven small coral islands with a total area of about 5½ square miles, are situated in the Indian Ocean in latitude 12° 05' S. and longitude 96° 53' E. They lie some 1,720 miles north-west of Perth and 2,290 miles almost due west of Darwin, while Johannesburg is some 3,800 miles further distant to the south-west and Colombo is 1,400 miles to the north-west of the group.



The main islands of the Territory are West Island, the largest, about six miles from north to south, on which are the aerodrome and most of the European community; Home Island, the headquarters of the Clunies-Ross Estate; Direction Island; South Island; and Horsburgh Island. North Keeling Island, which forms part of the Territory, lies about fifteen miles to the north of the groups and has no inhabitants.

Main settlements are on West Island and Home Island. The group of atolls is low-lying, flat and thickly covered by coconut palms, and surrounds a lagoon which has a harbour in the northern part but which is extremely difficult for navigation.

The climate is equable and pleasant, usually being under the influence of the south-east trade winds for about three-quarters of the year. However, the winds vary at times, and meteorological reports from the Territory are particularly valuable to those engaged in forecasting for the eastern Indian Ocean. The temperature varies between 70° and 89° F., and the average rainfall is about 86 inches. There are occasional violent storms. The population recorded by the census taken on 30 June 1971 was 625 (314 males and 311 females).

### History and administration

Summarised particulars of the discovery of the islands and their history up to 1946, when they became a dependency of the Colony of Singapore, are given in Year Book No. 51, page 140, and in earlier issues. On 23 November 1955 the Cocos Islands ceased to form part of the Colony of Singapore and were placed under the authority of the Commonwealth of Australia. The transfer was effected by an Order in Council made by Her Majesty Queen Elizabeth the Second under the Imperial Act entitled the Cocos Islands Act 1955 and by the *Cocos (Keeling) Islands Act 1955* of the Commonwealth whereby the islands were declared to be accepted by the Commonwealth as a Territory under the authority of the Commonwealth, to be known as the Territory of Cocos (Keeling) Islands.

Responsibility for the administration of the Territory rests with the Minister for External Territories. The first Official Representative was appointed on 23 November 1955 to take charge of the local administration of the Territory. Under the *Official Representative Ordinance 1955-1961* of the Territory, the Official Representative is given such powers and functions in relation to the Territory as are delegated to him by the Minister under the *Cocos (Keeling) Islands Act 1955-1966* or are otherwise conferred on him under that Act or by or under any other law of the Territory. The laws of the Colony of Singapore which were in force in the islands immediately before the date of the transfer were, with certain exceptions, continued in force by the *Cocos (Keeling) Islands Act 1955-1966*. They may be amended or repealed by Ordinances made under the provisions of that Act which empower the Governor-General to make Ordinances for the peace, order and good government of the Territory.

### Transport and communication

There is an international airport at West Island under the control of the Commonwealth Department of Civil Aviation. A fortnightly air service is provided between Perth and the Cocos Islands by Ansett and T.A.A. alternately. Although there is no regular shipping service, vessels from Australia and Singapore call at intervals. A radio teletype link with Perth is maintained by the Administration. Local postal and telephone services exist, and a non-commercial broadcasting station operates.

## CHRISTMAS ISLAND

Christmas Island is an isolated peak situated in the Indian Ocean in latitude 10° 25' 22" S., longitude 105° 39' 59" E. It is approximately 224 miles south from Java Head at the south entrance to Sunda Strait, 815 miles from Singapore and 1,630 miles from Fremantle. Christmas Island covers an area of about fifty-two square miles. It consists of a central plateau of about 600 to 800 feet with several prominent rises up to 1,170 feet. The plateau descends to the sea in a series of steep slopes alternating with terraces, the last dropping in a cliff of 200 to 300 feet to a shore terrace, terminating in a sea cliff of 10 to 150 feet, which is continuous round the island except in a few places, the chief of which is Flying Fish Cove, where the principal settlement is located and which is also the only known anchorage.

The climate is healthy and pleasant, and the prevailing winds come from the south-east to east-south-east from May to December, but from then to April (the wet season) they occasionally shift round to between north and west. The average yearly rainfall is about 64 inches with a marked summer incidence. The porous nature of the ground prevents the formation of pools of water, but there are several good springs which maintain an adequate supply of fresh water for the small population and the installations. The mean average temperature is about 80° F., and does not vary greatly throughout the year.

The economy of the Territory is based almost entirely on the mining and extraction of phosphate. Because of the nature of the land there appears little prospect of establishing any other economic activity.

At 30 June 1971 the preliminary census population was 3,044 (2,033 males and 1,011 females).

#### Education

The Christmas Island education system comprises a primary school and a secondary school following the Singapore curriculum, a primary school following an Australian curriculum and a technical training centre. The Singapore curriculum schools provide classes to Form 4 level and scholarships are available for students wishing to proceed to Singapore for education beyond that level.

At 30 June 1971, 648 children were enrolled at the primary and secondary schools following the Singapore curriculum. The combined staff establishment consisted of a headmaster, two senior teachers, 23 trained teachers, 1 trainee teacher and 2 temporary teachers. The Australian curriculum primary school had 67 pupils at 30 June 1971, with teachers seconded from the Western Australian Department of Education. There is also a Technical Training Centre, which opened in 1969.

#### History and administration

Summarised particulars of the history of Christmas Island up to its administration by the United Kingdom as a separate Crown Colony from 1 January 1958, pending transfer to Australia, are given in Year Book No. 51, page 141, and in earlier issues. On 1 October 1958 the island was transferred to the Commonwealth of Australia by the *Christmas Island Act* 1958 and is now administered as a Territory under the authority of the Commonwealth. Responsibility for the administration and government of the Territory rests with the Minister for External Territories, and day to day affairs on the island are administered by an Administrator under delegation from the Minister. The laws which were in force on the island at 30 September 1958 were continued as the laws of the Territory after its transfer to Australia. They may be amended or repealed by Ordinances or by laws made under Ordinances of the Territory.

#### Phosphate deposits

The only commercial activity carried out is the mining of phosphate. The British Phosphate Commissioners act as managing agents for the Christmas Island Phosphate Commission. There are three principal phosphate deposits on the islands, of which the largest is that now being worked at South Point. This field is situated on the 600 feet to 800 feet level and is approximately 12 miles from the drying and shipping plant at Flying Fish Cove. During 1970-71, 883,189 tons of phosphate were exported to Australia and New Zealand. In addition 103,796 tons of phosphate dust were exported to South-east Asia and Australia.

#### Transport and communication

Transport to and from the island is maintained by vessels operated under charter by the Christmas Island Phosphate Commission. One vessel makes regular trips between Christmas Island and Singapore, and other vessels carry phosphate to Australian ports and New Zealand.

A post office and internal telephone system are operated by the Administration. The latter comprises four automatic exchanges and three small subscriber-attended exchanges. A radio station is used for messages via Perth and Singapore and for communication with ships at sea. A limited broadcasting station commenced operating during 1966-67.

### CORAL SEA ISLANDS

The Coral Sea Islands were declared to be a Territory of the Commonwealth by the *Coral Sea Islands Act* 1969. The scattered reefs and islands, often little more than sandbanks, spread over a sea area of 400,000 square miles with only a few square miles of actual land area, between the Great Barrier Reef and longitude 157° 10' E.



## CHAPTER 29

### MISCELLANEOUS

This chapter comprises statistics and other descriptive information not directly related to the subjects of the preceding chapters, or which it is convenient to assemble in single sections, arranged as follows: Value of Australian primary production; Indexes of farm production; Consumption of food-stuffs and beverages; Internal trade (retail and wholesale trade); Interstate trade; Statistical organisation in Australia; Statistical and other official publications of Australia; Metric conversion for Australia.

#### VALUE OF AUSTRALIAN PRIMARY PRODUCTION

The figures published in the following tables have been compiled by the Statisticians in the various States from the latest and best data available and are on a substantially uniform basis. However, marketing costs are not on a completely comparable basis between States and, in addition, accurate information is difficult to obtain for many items. In consequence, differences between States in the relationships of local to gross value should be treated with some reserve.

##### Explanation of terms used

The following is a brief explanation of the terms used.

- (a) *Gross value of production* is the value placed on recorded production at the wholesale price realised at the principal markets. In general, the 'principal markets' are the metropolitan markets in each State. In cases where primary products are consumed at the place of production or where they become raw material for a secondary industry, these points of consumption are presumed to be the principal markets.
- (b) *Local value* (i.e. gross production valued at the place of production) is ascertained by deducting marketing costs from the gross value. Marketing costs include freight, cost of containers, commission, and other charges incidental thereto.
- (c) *Net value of production* represents local value less value of materials used in the process of production. Materials used in the process of production include seed, power, power kerosene, petrol and other oils, fodder consumed by farm stock, manures, dips, sprays, and other costs. No deductions have been made for depreciation or certain maintenance costs, as particulars are not available for all States. The net value of production is the only satisfactory measure to use when comparing or combining the value of primary industries with those of other industries.

For the years shown in the following tables, no allowance for power, power kerosene, petrol, and other oils has been made in New South Wales. Costs of materials used in the process of production in respect of bee-farming, hunting, forestry, and fisheries are not available for all States; local values have been used for these industries. Because of revisions, some figures may differ from corresponding figures in earlier chapters of this Year Book.

## Value of primary production, Australia

## GROSS, LOCAL AND NET VALUE OF PRODUCTION OF PRIMARY INDUSTRIES (EXCLUDING MINING): AUSTRALIA 1970-71

(\$'000)

Industry	Gross production valued at principal markets	Local value—gross production valued at place of production	Net value of production (without deduction of depreciation or maintenance)
Crops . . . . .	1,523,995	1,258,625	1,069,836
Pastoral . . . . .	1,328,908	1,198,820	998,185
Dairying . . . . .	566,989	529,323	436,254
Poultry . . . . .	195,322	170,485	83,297
Bee-farming . . . . .	4,702	4,179	(a)4,179
<i>Total, agriculture</i> . . . . .	<i>3,619,915</i>	<i>3,161,433</i>	<i>2,591,753</i>
Forestry . . . . .	139,955	128,960	(a)128,960
Fishing . . . . .	78,395	72,888	(a)72,888
Hunting . . . . .	10,152	9,048	(a)9,048
<i>Total, forestry, fishing and hunting</i> . . . . .	<i>228,502</i>	<i>210,896</i>	<i>210,896</i>
<i>Total, all primary (excluding mining)</i> . . . . .	<i>3,848,417</i>	<i>3,372,329</i>	<i>2,802,649</i>

(a) Local value.

## Net value of primary production

## NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES (EXCLUDING MINING) STATES AND TERRITORIES, 1970-71

(\$'000)

Industry	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Crops . . . . .	284,962	201,701	261,982	121,156	175,831	23,058	690	456	1,069,836
Pastoral . . . . .	317,380	273,134	170,401	94,717	101,485	21,031	18,636	1,401	998,185
Dairying . . . . .	114,895	202,724	55,075	31,097	8,474	23,523	158	308	436,254
Poultry . . . . .	38,830	22,692	6,871	5,237	5,707	2,711	1,015	234	83,297
Bee-farming(b) . . . . .	1,667	997	382	696	277	152	..	8	4,179
<i>Total, agriculture</i> . . . . .	<i>757,734</i>	<i>701,248</i>	<i>494,711</i>	<i>252,903</i>	<i>291,774</i>	<i>70,476</i>	<i>20,500</i>	<i>2,407</i>	<i>2,591,753</i>
Forestry(b) . . . . .	37,293	36,966	14,059	10,989	14,847	14,201	37	567	128,960
Fishing(b) . . . . .	13,224	6,462	10,458	8,177	25,028	5,116	4,424	..	72,888
Hunting(b) . . . . .	3,937	1,623	1,854	721	592	285	36	..	9,048
<i>Total forestry, fishing and hunting</i> . . . . .	<i>54,454</i>	<i>45,051</i>	<i>26,371</i>	<i>19,887</i>	<i>40,467</i>	<i>19,602</i>	<i>4,497</i>	<i>567</i>	<i>210,896</i>
<i>Total, all primary (excluding mining)</i> . . . . .	<i>812,188</i>	<i>746,299</i>	<i>521,082</i>	<i>272,790</i>	<i>332,241</i>	<i>90,077</i>	<i>24,997</i>	<i>2,974</i>	<i>2,802,649</i>

(a) See text on page 1005. (b) Local value.

NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES (EXCLUDING MINING) PER  
HEAD OF POPULATION, STATES, 1970-71  
(£)

Industry	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.(b)
Crops . . . . .	62.47	58.03	144.82	103.79	173.97	59.23	84.69
Pastoral . . . . .	69.58	78.58	94.20	81.14	100.41	54.02	79.01
Dairying . . . . .	25.19	58.32	30.44	26.64	8.38	60.42	34.53
Poultry . . . . .	8.51	6.53	3.80	4.49	5.65	6.96	6.59
Bee-farming(c) . . . . .	0.37	0.29	0.21	0.60	0.27	0.39	0.33
<i>Total, agriculture . . . . .</i>	<i>166.12</i>	<i>201.75</i>	<i>273.47</i>	<i>216.66</i>	<i>288.69</i>	<i>181.03</i>	<i>205.16</i>
Forestry(c) . . . . .	8.18	10.64	7.77	9.41	14.69	36.48	10.21
Fishing(c) . . . . .	2.90	1.86	5.78	7.01	24.76	13.14	5.77
Hunting(c) . . . . .	0.86	0.47	1.02	0.62	0.59	0.73	0.72
<i>Total, forestry, fish- ing and hunting . . . . .</i>	<i>11.94</i>	<i>12.96</i>	<i>14.58</i>	<i>17.04</i>	<i>40.04</i>	<i>50.35</i>	<i>16.69</i>
<i>Total, all primary (excluding mining)</i>	<i>178.06</i>	<i>214.71</i>	<i>288.05</i>	<i>233.69</i>	<i>328.72</i>	<i>231.38</i>	<i>221.85</i>

(a) See text on page 1005.

(b) Includes Northern Territory and Australian Capital Territory.

(c) Local value.

NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES (EXCLUDING MINING)  
AUSTRALIA, 1966-67 TO 1970-71  
(\$'000)

Industry	1966-67	1967-68	1968-69	1969-70	1970-71
Crops . . . . .	1,209,003	899,425	1,208,905	1,015,635	1,069,836
Pastoral . . . . .	1,181,848	1,044,436	1,194,994	1,204,444	998,185
Dairying . . . . .	371,939	371,306	381,152	418,877	436,254
Poultry . . . . .	67,218	61,245	68,431	81,444	83,297
Bee-farming(b) . . . . .	3,278	3,806	2,589	4,398	4,179
<i>Total, agriculture . . . . .</i>	<i>2,833,286</i>	<i>2,380,216</i>	<i>2,856,073</i>	<i>2,724,799</i>	<i>2,591,753</i>
Forestry(b) . . . . .	108,716	109,759	110,344	117,797	128,960
Fishing(b) . . . . .	44,574	54,003	58,663	58,468	72,888
Hunting(b) . . . . .	11,948	10,547	10,564	11,232	9,048
<i>Total, forestry, fishing and hunting . . . . .</i>	<i>165,238</i>	<i>174,307</i>	<i>179,571</i>	<i>187,497</i>	<i>210,896</i>
<i>Total, all primary . . . . .</i>	<i>3,998,524</i>	<i>2,554,523</i>	<i>3,035,644</i>	<i>2,912,296</i>	<i>2,802,649</i>

(a) See text on page 1005.

(b) Local value.

## INDEXES OF FARM PRODUCTION

In the first two tables in this section indexes of price and quantum (i.e. value at constant prices) of production are given for the following industrial groups: Crops, Pastoral, Dairying, Poultry and Bee-farming, and All farming combined. Separate indexes are shown for wheat, wool and milk. In the third table indexes of quantum (i.e. value at constant prices) of production, exports and consumption of farm products for food use are shown.

### Farm production price indexes

The farm production price indexes shown in the following table relate to average 'prices' of crops, pastoral, dairying, poultry and bee-farming products realised at the principal markets of Australia. The 'price' data used are average unit values for the total quantities of the relevant commodities produced or marketed in each year, and the index numbers therefore measure both the effects of changes in prices (as such) and of variations in the quality, type, usage, etc. of products marketed. The index numbers for any year relate to the average values of products produced or marketed in that year irrespective of the periods in which payment is received by producers.

The indexes have been calculated by the fixed-base weighted aggregative method. 'Prices' for each commodity in any year are obtained by dividing gross value of production by the quantity produced in that year. In the original published series of Production Price Index Numbers the average quantities of the relevant commodities *produced* in the period 1923-24 to 1927-28 were used as fixed weights. This series, re-computed to the base: average 1936-37 to 1938-39 = 100, was published in earlier issues of the Year Book (*see* No. 43, page 1050). For 1936-37 and later years the original series was replaced in December 1952 by a revised series in which average quantities of each product *marketed* during the period 1946-47 to 1950-51 were used as fixed weights. In the revised series the regimen was extended and modified to include farm products (as defined by Australian Statisticians) in all cases. Certain other refinements were also incorporated in the revised indexes, the principal of which was the omission from the weights used for the All farming index of quantities of crops marketed for livestock feeding in Australia.

### FARM PRODUCTION: INDEXES OF PRICES AT PRINCIPAL MARKETS, AUSTRALIA 1956-57 TO 1970-71

(Base: Average of 3 years ended June 1939 = 100)

Year	Crops		Pastoral		Dairying, poultry and bee-farming		All farming	
	Wheat	Total	Wool (shorn and dead)	Total	All milk	Total	Products other than wool	Total
1956-57	347	336	607	536	365	386	374	432
1957-58	339	336	473	435	375	382	359	388
1958-59	337	322	370	396	372	386	369	369
1959-60	350	329	440	464	383	402	391	403
1960-61	355	349	397	443	384	402	403	401
1961-62	380	348	412	421	373	373	376	385
1962-63	366	334	449	450	380	388	378	396
1963-64	356	351	531	511	382	402	398	431
1964-65	351	351	437	460	403	423	408	415
1965-66	372	354	458	501	395	422	423	431
1966-67	366	350	433	496	388	418	425	427
1967-68	397	371	382	457	380	413	429	417
1968-69	337	334	408	488	391	424	424	420
1969-70	359	348	343	451	393	427	434	411
1970-71	354	358	268	395	420	439	438	396

### Indexes of quantum (i.e. value at constant prices) of farm production

The indexes shown in the following table relate to gross output of farm products valued at constant prices. They have been calculated by revaluing quantities of each farm product included in the indexes at the average unit gross value of each product for the base years.

In the original published series the period 1923-24 to 1927-28 was adopted as the base for revaluing each farm product. This series, re-computed to the base: average 1936-37 to 1938-39 = 100, was published in earlier issues of the Year Book (*see* No. 43, page 1051). For 1936-37 and later years the original series was replaced in December 1952 by a revised series in which average unit values for the period 1936-37 to 1938-39 were used. The regimen used for the revised series was extended and modified to include farm products (as defined by Australian Statisticians) in all cases. Certain other refinements were incorporated in the revised indexes, the principal of which was the omission, in calculating the All farming index, of quantities of crops fed to livestock in Australia.



**INDEXES OF QUANTUM(a) OF FARM PRODUCTION: AUSTRALIA  
1956-57 TO 1970-71**

*(Base: Average of 3 years ended June 1939 = 100)*

Year	Crops		Pastoral		Dairying, poultry and bee-farming		All farming	
	Wheat	Total	Wool (shorn and dead)	Total	All milk	Total	Products other than wool	Total
1956-57	82	120	164	148	119	117	121	131
1957-58	59	109	148	142	111	114	116	124
1958-59	131	165	164	159	120	119	145	149
1959-60	121	140	172	163	123	123	136	144
1960-61	166	177	165	152	116	120	148	152
1961-62	150	163	174	160	125	128	150	155
1962-63	186	191	170	163	129	129	165	166
1963-64	199	196	183	172	131	131	171	174
1964-65	224	218	183	172	132	136	180	181
1965-66	158	184	169	163	133	138	165	166
1966-67	283	265	180	167	140	145	205	199
1967-68	168	189	180	174	132	141	173	175
1968-69	330	292	199	186	133	143	219	215
1969-70	235	242	208	199	146	155	206	207
1970-71	176	239	198	201	140	154	203	202

(a) Indexes of value at constant prices, i.e. quantities revalued at average unit values of the base years (see text preceding table).

**Farm products for food use: indexes of quantum (i.e. value at constant prices)  
of production, exports and consumption**

The indexes shown in the following table have been calculated by revaluing quantities of each farm product included in the indexes at the average unit gross value of each product for the years 1936-37 to 1938-39. The items included comprise products in the form in which they are sold from farms in all cases except livestock sold for slaughter for meat, which are included in terms of dressed carcass weight of meat. Quantity data relating to exports include exports of processed food in terms of farm product equivalent. The indexes of production relate basically to gross output of farm products for food use, including crops exported for stock-feeding overseas.

**FARM PRODUCTS FOR FOOD USE: INDEXES OF QUANTUM(a) OF  
PRODUCTION, EXPORTS AND CONSUMPTION  
AUSTRALIA, 1956-57 TO 1970-71**

*(Base: average of 3 years ended June 1939 = 100)*

Year	Production		Exports		Consumption in Australia	
	Total	Per head of total population	Total	Per head of total population	Total	Per head of total population
1956-57	123	88	118	85	136	98
1957-58	115	81	90	64	139	98
1958-59	146	101	137	94	142	98
1959-60	138	93	132	89	145	98
1960-61	148	98	170	112	143	95
1961-62	154	99	161	104	150	97
1962-63	168	107	187	119	154	98
1963-64	175	109	207	129	159	99
1964-65	185	112	219	134	163	99
1965-66	167	100	181	108	162	97
1966-67	197	115	243	143	167	98
1967-68	178	102	194	112	171	98
1968-69	192	108	216	122	177	100
1969-70	208	115	247	136	179	99
1970-71	203	110	281	152	188	102

(a) Indexes of value at constant prices, i.e. quantities revalued at average unit values for the base years (see text preceding table).

## CONSUMPTION OF FOODSTUFFS AND BEVERAGES

### Quantities consumed

The estimates of total consumption and consumption per head of population in Australia in the two tables which follow have been compiled by deducting net exports from the sum of production and imports and allowing for recorded movements in stocks of the respective commodities. While the estimates may be generally accepted as being reasonably accurate, there are some deficiencies to which attention should be directed. These relate chiefly to the quantities of fish, rabbits and hares and the quantities of certain oils and fats entering consumption. In addition, little information is available on the quantities of vegetables, fruit, eggs, etc. which householders produce for their own requirements and the extent of wastage occurring in the marketing of foodstuffs. In all these cases careful estimates have been compiled from the best available data, and the quantities shown as entering consumption in Australia have been adjusted to allow for these circumstances. The absence of particulars for stocks of certain commodities has resulted in some inaccuracies in the estimates of annual consumption. Consumption of foodstuffs is measured in general at 'producer' level. As a result, no allowance is made for wastage before the foodstuffs are consumed. In recent years wastage of foodstuffs has possibly been less than previously because of more efficient distribution and storage methods. Furthermore, it is likely that the quantities of foodstuffs shown in the following pages as available for consumption have been supplemented by production by householders for their own requirements. In most cases broad estimates of non-commercial (householders') production have been made. Except in a few special cases, no adjustment has been made for changes in stocks held by wholesalers and retailers. Where no allowance is made it is considered unlikely that these stocks would make any appreciable difference to consumption estimates. It is felt that the foregoing deficiencies do not seriously impair the accuracy of the estimates compiled.

The estimates of consumption per head of population shown in the second of the following tables have been derived by dividing the total apparent consumption of each commodity or commodity group in a given year by the mean population of Australia in the same period.

More detailed information on the consumption of foodstuffs and beverages is contained in the statistical bulletin: *Apparent Consumption of Foodstuffs and Nutrients* (10,10), issued by this Bureau.

The following tables show the average annual consumption during the three-year periods ended 1938-39, 1948-49 and 1958-59, together with the data for each of the years 1968-69, 1969-70 and 1970-71. Because of revisions, figures for some items in the following tables may differ from corresponding figures in earlier chapters of this Year Book.

### ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY: AUSTRALIA, 1936-37 TO 1970-71

Commodity	Average three years ended—						
	1938-39	1948-49	1958-59	1968-69	1969-70	1970-71p	
<b>Grain products—</b>							
Flour (including wheatmeal for baking and sharps) . . . . .	'000 tons	574.0	689.7	789.1	922.3	944.1	991.3
Breakfast foods. . . . .	"	32.5	45.8	58.8	84.4	75.3	74.3
Rice (milled) . . . . .	"	12.2	3.0	n.a.	29.1	30.2	32.6
Tapioca, sago, etc. . . . .	"	3.7	2.3	1.4	0.9	0.8	0.8
Pearl barley . . . . .	"	3.0	1.7	2.0	1.7	0.3	1.4
<i>Total grain products</i> . . . . .	"	(a)629.7	(a)747.4	n.a.	1,038.3	1,050.6	1,100.4
<b>Sugar and syrups—</b>							
Refined sugar—							
As sugar . . . . .	'000 tons	216.5	234.6	259.0	245.1	250.7	248.9
In manufactured products . . . . .	"	110.1	174.2	226.1	339.7	358.4	377.3
Honey, glucose and syrups (sugar content) . . . . .	"	17.3	19.1	22.8	36.8		
<i>Total sugar and syrups (sugar content)</i> . . . . .	"	343.9	427.9	507.9	621.6		
<b>Pulse and nuts—</b>							
Dried pulse . . . . .	"	4.5	7.4	11.1			
Peanuts (weight without shell) . . . . .	"	2.8	8.7	7.2			
Edible tree nuts (weight without shell) . . . . .	"	2.6	4.4	6.7	11.6	10.4	33.7
Cocoa (raw beans) . . . . .	"	6.3	11.6	12.1			
<i>Total pulse and nuts</i> . . . . .	"	16.2	32.1	37.1			

For footnotes see next page.

## ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY: AUSTRALIA, 1936-37 TO 1970-71—continued

Commodity	Average three years ended—					
	1938-39	1948-49	1958-59	1968-69	1969-70	1970-71 <sup>p</sup>
<b>Vegetables(b)—</b>						
Leafy and green vegetables . . . '000 tons	n.a.	154.0	172.1	251.1	261.8	256.0
Tomatoes . . . . .	(c)48.0	86.3	124.4	168.1	152.5	203.2
Root and bulb vegetables . . . . .	n.a.	143.7	152.8	215.2	208.9	216.9
Potatoes—						
White . . . . .	318.5	424.3	495.4	729.5	679.3	675.9
Sweet . . . . .	7.4	5.3	6.1	7.6	7.8	7.9
Other vegetables . . . . .	n.a.	162.8	178.4	204.4	233.1	219.7
<i>Total vegetables</i> . . . . .	n.a.	976.4	1,129.2	1,575.9	1,543.4	1,579.7
<b>Fruit—</b>						
Citrus fruit(b) . . . . .	97.8	127.2	153.8	289.9	296.4	377.2
Other fresh fruit . . . . .	288.2	297.5	341.4	535.1	454.2	560.8
Jams . . . . .	35.1	42.5	37.5	39.6	37.5	36.9
Dried fruit . . . . .	24.8	30.0	26.4	28.9	27.8	30.3
Canned fruit . . . . .	31.9	37.3	59.4	114.1	121.4	112.8
<i>Total fruit (fresh fruit equivalent)</i> . . . . .	532.3	607.9	691.4	1,106.1	1,038.2	1,233.3
<b>Meat—</b>						
Beef and veal (carcass weight) . . . . .	430.3	372.7	538.4	495.0	473.5	494.5
Mutton . . . . .	184.1	154.0	221.6	228.5	207.3	245.7
Lamb . . . . .	46.0	86.1	127.7	259.3	252.2	287.8
Pigmeat . . . . .	26.2	24.3	43.6	87.7	92.1	86.2
Offal . . . . .	25.7	30.3	49.7	61.1	63.5	63.9
Canned meat (canned weight) . . . . .	6.5	9.0	17.9	26.7	28.2	30.8
Bacon and ham (cured carcass weight) . . . . .	31.5	39.9	30.5	42.4	46.2	57.8
<i>Total meat (in terms of carcass equivalent weight)</i> . . . . .	769.9	736.9	1,054.1	1,223.4	1,187.6	1,297.8
Poultry (dressed weight) . . . . .	n.a.	n.a.	n.a.	107.7	128.6	141.8
Eggs and egg products (in terms of eggs in shell)—						
Eggs in shell . . . . .	78.7	86.5	92.1	(d)139.9	(d)143.0	(d)146.1
Egg pulp . . . . .	2.9	8.6	5.7	(d)8.9	(d)9.1	(d)9.0
Egg powder . . . . .	..	..	0.2	(d)0.8	(d)0.8	(d)0.9
<i>Total eggs and egg products</i> . { mil. doz.	81.6 193.3	95.1 162.3	98.0 167.3	(d)149.7 223.5	(d)152.9 228.3	(d)155.9 232.8
<b>Fish (weight)—</b>						
Fresh—						
Australian origin . . . . . '000 tons			13.8	18.7	21.7	20.5
Imported . . . . .	19.7	19.4	9.0	20.6	19.8	26.3
Cured (including smoked and salted) . . . . .	..	..	3.8	5.8	4.7	5.7
Crustaceans and molluscs . . . . .	2.1	2.1	3.8	8.2	8.8	11.9
Canned—Australian origin . . . . .	12.4	10.5	3.3	6.1	7.0	5.8
Imported . . . . .	..	..	7.4	11.4	11.1	10.8
<i>Total fish (edible weight)</i> . . . . .	n.a.	n.a.	n.a.	70.8	73.1	81.0
<b>Milk and milk products—</b>						
Fluid whole milk . . . . . mil. gal	161	233	276	340	351	359
Fresh cream . . . . . '000 tons	19.7	5.1	8.7	10.9	11.1	11.3
Condensed, concentrated and evaporated milk—						
Full cream—						
Sweetened . . . . .	13.2	11.9	11.3	11.6	12.5	10.4
Unsweetened . . . . .	..	13.6	27.6	(e)42.2	(e)42.5	(e)58.5
Skim . . . . .	n.a.	n.a.	5.6	8.5	8.4	14.1
Powdered milk—						
Full cream . . . . .	8.1	11.0	11.0	9.8	9.5	9.7
Skim . . . . .	..	1.9	10.7	(f)55.0	(f)54.6	(f)50.5
Infants' and invalids' foods . . . . .	3.0	4.3	9.4	14.8	14.3	10.0
Cheese . . . . .	13.4	18.8	25.0	42.8	44.9	50.9
<i>Total milk and milk products (in terms of milk solids)</i> . . . . .	120.5	167.4	212.4	308.4	315.3	325.2
<b>Fats and oils—</b>						
Butter . . . . .	101.4	84.7	118.4	114.8	113.9	115.2
Margarine—						
Table . . . . .	2.8	3.0	n.a.	16.2	16.2	15.9
Other . . . . .	12.2	18.7	21.2	44.5	46.7	47.4
Vegetable oils and other fats . . . . .	19.6	18.0	19.6	24.5	25.0	25.5
<i>Total fats and oils (fat content)</i> . . . . .	115.5	105.5	n.a.	171.3	173.2	175.0
<b>Beverages—</b>						
Tea . . . . .	21.1	22.1	26.1	27.8	27.1	27.2
Coffee(g) . . . . .	2.0	3.4	5.9	14.1	15.4	16.2
Beer . . . . . mil. gal	80.1	129.5	221.0	321.8	337.1	352.2
Wine . . . . .	4.2	9.8	11.1	22.0	24.4	24.4
Spirits . . . . . mil. pf gal	1.5	2.4	2.8	4.3	4.9	5.1

(a) Includes an allowance for edible starch (cornflour). (b) Includes fresh equivalent of manufactured products.  
(c) Probably understated owing to lack of complete data. (d) Not comparable with data prior to 1960-61, in which year the average weight of an egg was altered in calculations from 1.75 oz to 2 oz. (e) Includes ice cream mixes.  
(f) Includes buttermilk and mixed skim and buttermilk. (g) Coffee and coffee products in terms of processed whole or ground pure coffee.

**ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR  
CONSUMPTION ANNUALLY PER HEAD OF POPULATION: AUSTRALIA, 1936-37 TO 1970-71**

Commodity	Average three years ended—						
	1938-39	1948-49	1958-59	1968-69	1969-70	1970-71p	
<b>Grain products—</b>							
Flour (including wheatmeal for baking and sharps)	lb	187.1	201.9	181.5	169.7	169.9	174.7
Breakfast foods	"	10.6	13.4	13.5	15.5	13.6	13.1
Rice (milled)	"	4.0	0.9	n.a.	5.4	5.4	5.7
Tapioca, sago, etc.	"	1.2	0.7	0.3	0.2	0.1	0.1
Pearl barley	"	1.0	0.5	0.4	0.3	..	0.3
<i>Total grain products</i>	"	(a)205.3	(a)218.8	n.a.	191.1	189.1	194.0
<b>Sugar and syrups—</b>							
Refined sugar—							
As sugar	"	70.6	68.7	59.6	45.1	45.1	43.9
In manufactured products	"	35.9	51.0	52.0	62.5	64.5	66.5
Honey, glucose and syrups (sugar content)	"	5.5	5.6	5.2	6.8	n.a.	n.a.
<i>Total sugar and syrups (sugar content)</i>	"	112.0	125.3	116.8	114.4	n.a.	n.a.
<b>Pulse and nuts—</b>							
Dried pulse	"	1.5	2.1	2.6	n.a.	n.a.	n.a.
Peanuts (weight without shell)	"	0.9	2.5	1.7	n.a.	n.a.	n.a.
Edible tree nuts (weight without shell)	"	0.8	1.3	1.5	2.1	1.9	2.1
Cocoa (raw beans)	"	2.1	3.4	2.8	n.a.	n.a.	n.a.
<i>Total pulse and nuts</i>	"	5.3	9.3	8.6	n.a.	n.a.	n.a.
<b>Vegetables(b)—</b>							
Leafy and green vegetables	"	n.a.	45.1	39.5	46.2	47.1	45.1
Tomatoes	"	(c)15.7	25.3	28.6	30.9	27.5	35.8
Root and bulb vegetables	"	n.a.	42.1	35.1	39.6	37.6	38.2
Potatoes—							
White	"	103.8	124.2	113.9	134.3	122.3	119.1
Sweet	"	2.4	1.5	1.4	1.4	1.4	1.4
Other vegetables	"	n.a.	47.7	41.0	37.6	42.0	38.7
<i>Total vegetables</i>	"	n.a.	285.9	259.5	290.0	277.8	278.4
<b>Fruit—</b>							
Citrus fruit(b)	"	31.9	37.2	35.4	53.4	53.4	66.5
Other fresh fruit	"	94.0	87.1	78.4	98.5	81.8	98.9
Jams	"	11.4	12.4	8.6	7.3	6.7	6.5
Dried fruit	"	8.1	8.7	6.0	5.3	5.0	5.3
Canned fruit	"	10.4	11.0	13.6	21.0	21.8	19.9
<i>Total fruit (fresh fruit equivalent)</i>	"	173.6	178.0	157.6	203.6	186.9	217.4
<b>Meat—</b>							
Beef and veal (carcass weight)	"	140.3	109.1	123.8	91.1	85.2	87.2
Mutton	"	60.0	45.1	51.0	42.1	37.3	43.3
Lamb	"	15.0	25.2	29.3	47.7	45.4	50.7
Pigmeat	"	8.5	7.1	10.1	16.1	16.7	15.2
Offal	"	8.4	8.9	11.4	11.2	11.4	11.3
Canned meat (canned weight)	"	2.1	2.6	4.1	4.9	5.1	5.4
Bacon and ham (cured carcass weight)	"	10.2	11.7	7.1	7.8	8.3	10.2
<i>Total meat in terms of carcass equivalent weight)</i>	"	250.9	215.7	242.4	225.1	213.8	228.8
Poultry (dressed weight)	"	n.a.	n.a.	n.a.	19.8	23.1	25.0
<b>Eggs and egg products (in terms of eggs in shell)—</b>							
Eggs in shell	"	25.7	25.4	21.2	(d)25.7	(d)25.7	(d)25.7
Egg pulp	"	0.9	2.5	1.3	(d)1.6	(d)1.6	(d)1.6
Egg powder	"	..	..	..	(d)0.1	(d)0.1	(d)0.1
<i>Total eggs and egg products</i>	No.	26.6 243	27.9 255	22.5 206	(d)27.5 220	(d)27.5 220	(d)27.5 220
<b>Fish (edible weight)—</b>							
Fresh—							
Australian origin	lb	6.4	5.7	3.2	3.4	3.9	3.6
Imported	"			2.1	3.8	3.6	4.6
Cured (including smoked and salted)	"			0.9	1.1	0.9	1.0
Crustaceans and molluscs	"	0.7	0.6	0.9	1.5	1.6	2.1
Canned—							
Australian origin	"	4.1	3.0	0.8	1.1	1.3	1.0
Imported	"			1.7	2.1	2.0	1.9
<i>Total fish (edible weight)</i>	"	n.a.	n.a.	n.a.	13.0	13.1	14.3

For footnotes see next page.



**ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR  
CONSUMPTION ANNUALLY PER HEAD OF POPULATION: AUSTRALIA  
1936-37 TO 1970-71—continued**

Commodity		Average three years ended—				
		1938-39	1948-49	1958-59	1968-69	1969-70 1970-71 <sup>p</sup>
Milk and milk products—						
Fluid whole milk . . . . .	gallons	23.4	30.5	28.0	28.0	28.2 28.3
Fresh cream . . . . .	lb	6.1	1.5	2.0	2.0	2.0 2.0
Condensed, concentrated and evaporated milk—						
Full cream—						
Sweetened . . . . .	"	4.3	3.5	2.6	2.1	2.2 1.8
Unsweetened . . . . .	"	4.0	4.0	6.4	(e)7.8	(e)7.6 (e)10.3
Skim . . . . .	"	n.a.	n.a.	1.3	1.6	1.5 2.5
Powdered milk—						
Full cream . . . . .	"	2.6	3.2	2.5	1.8	1.7 1.7
Skim . . . . .	"	..	0.6	2.5	(f)10.1	(f)9.8 (f)8.9
Infants' and invalids' foods . . . . .	"	1.0	1.3	2.2	2.7	2.6 1.8
Cheese . . . . .	"	4.4	5.5	5.7	7.9	8.1 9.0
Total milk and milk products (in terms of milk solids) . . . . .	"	39.3	49.1	48.7	56.6	56.7 57.3
Fats and oils—						
Butter . . . . .	"	32.9	24.8	27.2	21.1	20.5 20.3
Margarine—						
Table . . . . .	"	0.9	0.9	n.a.	3.0	2.9 2.8
Other . . . . .	"	4.0	5.2	4.9	8.2	8.4 8.3
Vegetable oils and other fats . . . . .	"	6.4	5.3	4.5	4.5	4.5 4.5
Total fats and oils (fat content) . . . . .	"	37.6	30.9	n.a.	31.5	31.2 30.8
Beverages—						
Tea . . . . .	"	6.9	6.5	6.0	5.1	4.9 4.8
Coffee(g) . . . . .	"	0.6	1.0	1.3	2.6	2.8 2.9
Beer . . . . .	gallons	11.7	16.9	22.7	26.4	27.1 27.7
Wine . . . . .	"	0.6	1.3	1.1	1.8	2.0 1.9
Spirits . . . . .	pf gal	0.2	0.3	0.3	0.4	0.4 0.4

(a) Includes an allowance for edible starch (cornflour). (b) Includes fresh equivalent of manufactured products.  
(c) Probably understated owing to lack of complete data. (d) Not comparable with data prior to 1960-61, in which year the average weight of an egg was altered in calculations from 1.75 oz to 2 oz. (e) Includes ice cream mixes. (f) Includes buttermilk and mixed skim and buttermilk. (g) Coffee and coffee products in terms of processed whole or ground pure coffee.

### Level of nutrient intake

The next table shows details of the estimated supplies of nutrients available for consumption in Australia during the years 1968-69 to 1970-71 in comparison with the annual averages for the three-year periods ended 1938-39, 1948-49 and 1958-59. The table has been compiled by the Nutrition Section of the Commonwealth Department of Health and is based on the estimates of the quantity of foodstuffs available for consumption per head of population shown in the preceding table.

**ESTIMATED SUPPLY OF NUTRIENTS AVAILABLE FOR CONSUMPTION  
AUSTRALIA, 1936-37 TO 1970-71  
(Per head per day)**

Nutrient		Average three years ended—			1968-69	1969-70	1970-71 <sup>p</sup>
		1938-39	1948-49	1958-59	(a)	(a)	(a)
Kilocalories . . . . .		3,117	3,245	3,297	3,364	3,264	3,352
Protein—							
Animal . . . . .	g	58.7	57.4	59.6	61.5	64.7	64.7
Vegetable . . . . .	"	30.9	35.3	32.3	40.3	35.6	35.9
Total . . . . .	"	89.6	92.7	91.9	101.8	100.3	100.6
Fat . . . . .	"	133.5	121.7	131.7	125.4	122.6	121.9
Carbohydrate . . . . .	"	377.4	424.8	416.7	419.2	412.7	412.9
Calcium . . . . .	mg	642	785	817	985	980	986
Iron . . . . .	"	15.4	15.1	14.0	15.1	14.8	15.1
Vitamin A . . . . .	I.U.	4,905	4,630	4,568	(b)1,557	(b)1,548	(b)1,555
Ascorbic acid . . . . .	mg	86	96	89	98	92	102
Thiamine . . . . .	"	1.4	1.5	1.3	1.7	1.6	1.7
Riboflavin . . . . .	"	1.7	1.9	1.8	2.8	2.9	2.8
Niacin . . . . .	"	18.7	17.6	18.6	20.9	20.1	21.7

(a) Not comparable with previous years. Figures are based on conversion factors calculated from the revised and enlarged edition of 'Tables of Composition of Australian Foods'. (b) Microgrammes.

NOTE. One international unit of vitamin A activity is equivalent to 0.3 microgrammes of retinol.

## INTERNAL TRADE

Extensive statistics of retail trade have been collected and published over many years. The first full census of wholesale trade, however, was conducted as part of the integrated economic censuses of 1968-69, outlined briefly below. For a detailed description of these censuses, reference should be made to Year Book No. 56, 1970, Chapter 31. Preliminary results of the retail and wholesale censuses for the year ended 30 June 1969 were published in the following Preliminary Bulletins: Retail Establishments and Selected Service Establishments (11.8-16); and Wholesale Establishments (11.52-60). These publications contain more detail for States than is shown in the table below.

**Economic Censuses, 1968-69**

For the year ended 30 June 1969 the censuses of Wholesale Trade, and of Retail Trade and Selected Services, were conducted for the first time on an integrated basis with censuses of Mining, Manufacturing, and Electricity and Gas Production and Distribution. The integration of these economic censuses was designed to increase substantially the usefulness and comparability of the kinds of statistics already being collected and published by the Bureau and to form a basis for the sample surveys which supply current economic statistics from quarter to quarter, particularly those which provide data for the quarterly national income and expenditure estimates.

The integration of these economic censuses meant that for the first time they were being collected on the basis of a common framework of reporting units and data concepts and in accordance with a standard industrial classification. As a result, the statistics for the industries covered by the censuses are now provided with no overlapping or gaps in scope, and in such a way that aggregates for certain important economic data such as value added, employment, salaries and wages, fixed capital expenditure and stocks can be obtained on a consistent basis for all sectors of the economy covered by the censuses.

The standardisation of census units in the integration of economic censuses means that the basic census unit (the establishment) in general now covers all the operations carried on under the one ownership at a single physical location. The retail establishment is thus one predominantly engaged in retailing, and the wholesale establishment one predominantly engaged in wholesaling, but the data supplied for them now cover, with a few exceptions, all activities at the location.

Establishment statistics, other than the number of establishments, also include data relating to separately located administrative offices and ancillary units serving the establishment and forming part of the business (enterprise) which owns and operates the establishment. These units, such as head offices, storage premises, transport depots and motor vehicle repair and maintenance workshops, were formerly excluded from censuses.

Figures in the summary tables shown in this section were obtained from the 1968-69 censuses and are preliminary only and subject to revision. Further and more detailed statistics from the 1968-69 censuses will be published progressively.

*Wholesale trade.* The term wholesale trade is used in the wholesale census in the broad sense to include the resale (by agents or principals) of new or used goods to retailers or other wholesalers or to institutional (including government), professional or other business users (including farmers and builders). The more important types of business engaged in wholesale trade are wholesale merchants, who take title to the goods they sell; manufacturers' sales branches; commission agents, including import and export agents and purchasing agents; petroleum products distributors; and co-operative and marketing boards engaged in marketing farm products.

Each establishment in the integrated censuses is identified in terms of a particular location and all sales, employment, etc., are recorded for that location, regardless of the size of the sales territory covered, i.e. the location of customers. For this reason, all of the sales, etc., of the wholesale establishments located in the State of Victoria, for example, are credited to Victoria even though the sales territories may extend over several States.

In the tables which follow, wholesale establishments have been classified by the type of operation according to the nature of the functions performed. The basis of this classification is the description of 'type of operation' reported by businesses for each individual wholesale establishment.

**WHOLESALE ESTABLISHMENTS: SUMMARY OF OPERATIONS  
BY BROAD TYPE OF OPERATION: AUSTRALIA, 1968-69**

Broad type of operation	Number of establishments operating during 1968-69	Persons employed (a)	Wages and salaries	Sales on own account, transfers out and other operating revenue	Stocks at 30 June		Purchases, transfers in and selected expenses	Value added (b)	Sales or purchases on commission
	No.	No.	\$m	\$m	1968	1969	\$m	\$m	\$m
Primary produce dealers or agents . . . . .	3,619	37,904	107.6	1,560.2	112.8	109.1	1,316.0	240.6	2,849.9
Wholesale merchants—									
Import and/or export merchants . . . . .	3,285	34,406	108.1	2,129.5	280.6	320.7	1,889.6	280.1	293.3
Other wholesale merchants holding stocks . . . . .	18,802	202,436	560.4	7,728.7	959.5	1,041.0	6,441.4	1,368.7	335.5
Manufacturers' sales branches . . . . .	1,804	30,036	96.6	1,481.5	163.0	184.9	1,171.7	331.7	444.0
Commission agents or brokers . . . . .	3,579	17,061	46.5	357.2	31.7	35.1	244.1	116.5	2,202.6
Petroleum distributors . . . . .	2,423	21,396	75.7	1,632.1	119.7	136.0	1,322.7	325.7	1,346.2
Repairers and lessors of machinery and equipment . . . . .	732	4,671	13.3	74.8	4.0	5.0	25.6	50.2	1.5
<b>Total wholesale trade . . . . .</b>	<b>34,244</b>	<b>347,930</b>	<b>1,008.4</b>	<b>14,964.1</b>	<b>1,671.3</b>	<b>1,831.9</b>	<b>12,411.2</b>	<b>2,713.6</b>	<b>7,472.9</b>

For footnotes see table below.

**WHOLESALE ESTABLISHMENTS: STATES AND TERRITORIES, 1968-69**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Establishments operating during 1968-69 . . . . .	12,098	9,566	5,012	3,163	3,142	920	107	236	34,244
Persons employed(a) . . . . .	126,737	98,280	49,092	32,132	30,918	8,435	745	1,591	347,930
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Wages and salaries . . . . .	385.5	295.5	128.9	86.3	82.3	22.7	2.4	4.7	1,008.4
Sales on own account, transfers out and other operating revenue . . . . .	5,466.3	4,633.0	2,072.0	1,195.7	1,225.8	287.6	29.3	54.4	14,964.1
Stocks at 30 June—									
1968 . . . . .	612.2	541.2	206.3	130.9	135.1	37.0	3.6	4.9	1,671.3
1969 . . . . .	681.3	584.5	222.7	140.0	154.3	39.5	4.2	5.5	1,831.9
Purchases, transfers in and selected expenses . . . . .	4,516.5	3,861.9	1,736.7	978.9	1,015.4	235.9	22.8	43.1	12,411.2
Value added(b) . . . . .	1,018.9	814.3	351.7	226.0	229.6	54.2	7.0	11.9	2,713.6
Sales or purchases on commission . . . . .	2,705.5	2,390.3	926.0	574.6	685.7	150.7	26.2	13.9	7,472.9

(a) At end of June 1969; includes working proprietors. (b) Sales on own account, transfers out and other operating revenue plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.

**Retail trade.** The definition of 'retail trade' adopted in the 1968-69 Retail Census is the same as the definition used in previous retail censuses, i.e. the resale of new and used goods to final consumers for personal and household consumption. The basis on which previous censuses of retail establishments were conducted was described in detail in Year Book No. 56, 1970 (page 1022).

Previous censuses of retail establishments included a number of activities that were also covered by the annual manufacturing census: principally motor vehicle repairs, dry cleaning, shoe repairs and tyre retreading. Takings from these activities were reported in the retail trade census but not included in 'retail sales'. The following activities were also included in previous retail censuses if they were carried on in establishments which had retail sales of more than \$1,000: custom dress-making and custom tailoring, clothing repair and alterations, making up and repair of blinds, awnings and curtains, repairs of domestic appliances, panel beating and smash repairs, watch and clock repairs, jewellery repairs, and baking of cakes in cake shops. These activities were also covered by the annual manufacturing census. With the adoption of the new establishment concept in the 1968-69 economic censuses, no establishment was required to supply returns in more than one census and all establishments mainly engaged in the above activities are now included in the retail trade census only.

Censuses of retail trade in Australia have traditionally included certain types of service establishments in their scope, in addition to retail establishments more narrowly defined. Some of the service establishments so included make retail sales in appreciable volume as well as providing important services for which the statistics can be conveniently collected in the framework of the retail census.



The census of retail trade for 1968-69 included the following types of service establishments in its scope in addition to establishments classified to Retail Trade: motion picture theatres; cafes and restaurants; licensed hotels, motels and wine saloons; licensed clubs; laundry and dry cleaning services; and hairdressing and beauty salons. Of these service industries, cafes and restaurants, licensed hotels, motels and wine saloons and hairdressing and beauty salons had been included in previous censuses as retail establishments, while the remainder were included in the supplementary collections made from establishments not described as retail establishments.

Some changes in the scope of the retail census have been made for reasons not connected with the introduction of a standard industrial classification; for example bread vending and milk vending by independent vendors mainly engaged in retailing bread or milk by home delivery service are included for the first time.

Because of the changes which have occurred in the definition of census units, the scope of the census and the items of data collected, it is not possible to make direct comparisons between the figures obtained from the 1968-69 Retail Census and those obtained from previous retail censuses or from the monthly and quarterly retail surveys based on previous retail censuses. For further information concerning such changes and their effects on comparisons with other statistics of retail trade, reference should be made to Year Book No. 56, 1970, Chapter 31, and to *Economic Censuses, 1968-69: Retail Establishments and Selected Service Establishments—Preliminary Bulletins* (11.7-16).

#### RETAIL ESTABLISHMENTS AND SELECTED SERVICE ESTABLISHMENTS: SUMMARY OF OPERATIONS, BY INDUSTRY GROUP, AUSTRALIA, 1968-69

Industry group	Number of establishments operating during 1968-69	Persons employed (a)	Wages and salaries	Sales and other operating revenue	Stocks at 30 June		Purchases, transfers in and selected expenses	Value added (b)
	No.	No.	\$m	\$m	1968	1969	\$m	\$m
Department, variety and general stores . . . .	1,048	97,558	201.9	1,364.7	185.2	199.6	1,020.9	358.2
Food stores . . . . .	55,273	224,261	258.2	3,356.5	173.2	190.1	2,707.8	665.6
Bread and milk vendors . . . .	5,822	14,610	10.6	202.1	0.7	0.7	159.6	42.5
Clothing, fabrics and furniture stores . . . . .	20,317	86,532	138.6	1,251.3	243.9	259.2	908.2	358.4
Household appliance and hardware stores . . . .	8,113	39,878	80.8	658.3	103.8	110.5	468.3	196.7
Motor vehicle dealers, petrol and tyre retailers . . . .	26,927	170,746	360.6	4,335.2	320.6	356.3	3,448.4	922.5
Other retailers . . . . .	19,358	84,462	112.6	984.7	146.1	159.9	678.4	320.1
<i>Total retail establishments</i>	<i>136,858</i>	<i>718,047</i>	<i>1,163.3</i>	<i>12,152.9</i>	<i>1,173.5</i>	<i>1,276.4</i>	<i>9,391.5</i>	<i>2,864.3</i>
Motion picture theatres . . . .	1,039	8,968	13.1	53.9	0.3	0.3	21.3	32.6
Restaurants and licensed hotels . . . .	11,734	124,407	202.0	1,221.6	34.2	38.0	744.3	481.1
Licensed clubs . . . . .	2,783	38,143	81.5	348.0	7.9	8.7	141.9	206.9
Laundries and dry cleaners . . . .	2,232	20,621	36.2	92.3	1.4	1.5	23.7	68.7
Hairdressing and beauty salons . . . .	9,432	27,133	26.7	84.9	2.8	3.2	20.4	64.9
<i>Total selected service establishments</i>	<i>27,220</i>	<i>219,272</i>	<i>359.6</i>	<i>1,800.7</i>	<i>46.6</i>	<i>51.7</i>	<i>951.5</i>	<i>854.3</i>
<i>Total retail and selected service establishments</i>	<i>164,078</i>	<i>937,319</i>	<i>1,522.9</i>	<i>13,953.6</i>	<i>1,220.1</i>	<i>1,328.1</i>	<i>10,343.0</i>	<i>3,718.6</i>

For footnotes see table below.

#### RETAIL ESTABLISHMENTS AND SELECTED SERVICE ESTABLISHMENTS STATES AND TERRITORIES, 1968-69

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Establishments operating during 1968-69 . . . .	60,711	45,722	23,736	15,196	12,050	5,017	581	1,053	164,078
Persons employed(a) . . . .	356,599	263,706	121,856	86,104	69,758	27,227	3,549	8,327	937,319
Wages and salaries . . . .	\$m 622.4	\$m 409.9	\$m 187.0	\$m 129.3	\$m 108.2	\$m 41.2	\$m 7.5	\$m 17.1	\$m 1,522.9
Sales and other operating revenue . . . . .	5,332.4	3,875.9	1,847.0	1,168.0	1,117.9	390.2	70.5	150.1	13,953.6
Stocks at 30 June—									
1968 . . . . .	457.7	325.3	173.7	111.2	93.4	39.2	6.3	13.3	1,220.1
1969 . . . . .	493.0	360.3	188.5	121.0	100.7	42.6	7.8	14.1	1,328.1
Purchases, transfers in and selected expenses . . . .	3,878.9	2,881.7	1,394.8	874.9	853.2	293.3	53.2	112.4	10,343.0
Value added(b) . . . . .	1,488.8	1,029.2	467.0	302.9	272.0	100.3	18.8	38.5	3,718.6

(a) At end of June 1969; includes working proprietors and unpaid helpers working at least 15 hours during the week.  
(b) Sales, and other operating revenue plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.



**Value of retail sales in each commodity group, Australia, based on  
1961-62 Census of Retail Establishments**

The following table shows the value of retail sales of goods in each of the commodity groups specified in the years 1961-62, and 1968-69 to 1971-72, on a comparable basis throughout. The figures for the year 1961-62 were obtained from the 1961-62 census (*see* Year Book No. 56, 1970, page 1022), and figures for the other years shown are estimates based on sample surveys, on a basis comparable with the 1961-62 census.

**VALUE OF RETAIL SALES: COMMODITY GROUPS, AUSTRALIA(a)  
1961-62 AND 1968-69 TO 1971-72  
(\$ million)**

<i>Commodity group</i>	<i>1961-62</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>	<i>1971-72</i>
Groceries . . . . .	858.3	1,321.4	1,406.7	1,504.6	1,651.4
Butchers' meat . . . . .	422.3	632.4	675.0	711.8	757.6
Other food(b) . . . . .	729.9	1,040.3	1,123.4	1,206.0	1,285.9
<i>Total, food and groceries</i> . . . . .	<i>2,010.5</i>	<i>2,994.1</i>	<i>3,205.1</i>	<i>3,422.4</i>	<i>3,694.9</i>
Beer, wine and spirits(c) . . . . .	545.9	867.2	944.4	1,018.0	1,089.6
Clothing and drapery . . . . .	900.0	1,314.1	1,400.0	1,511.9	1,629.5
Footwear . . . . .	154.7	216.0	232.9	250.1	261.9
Hardware, china and glassware(d) . . . . .	146.0	201.0	223.1	244.7	267.0
Electrical goods(e) . . . . .	348.0	466.8	501.7	549.6	614.0
Furniture and floor coverings . . . . .	230.1	394.8	435.6	470.9	506.8
Chemists' goods . . . . .	265.8	455.2	504.7	556.6	600.2
Newspapers, books and stationery . . . . .	166.4	273.5	299.4	324.0	341.6
Other goods(f) . . . . .	489.7	813.9	884.8	941.7	1,012.8
<b>Total (excluding motor vehicles, etc.)</b>	<b>5,257.1</b>	<b>7,996.6</b>	<b>8,631.7</b>	<b>9,289.9</b>	<b>10,018.3</b>
Motor vehicles, parts, petrol, etc.(g) . . . . .	1,603.2	3,055.9	3,391.2	3,635.6	3,910.7

(a) Excludes Northern Territory and Australian Capital Territory. (b) Includes fresh fruit and vegetables, confectionery, soft drinks, ice cream, cakes, pastry, cooked provisions, fish, etc., but excludes some delivered milk and bread. (c) Excludes sales made by licensed clubs. (d) Excludes basic building materials, builders' hardware and supplies such as tools of trade, paint, etc. (e) Includes radios, television and accessories, musical instruments, domestic refrigerators, etc. (f) Includes tobacco, cigarettes, etc., jewellery, sporting goods, etc., but excludes grain and produce and business machines. (g) Includes new and used motor vehicles, parts, petrol, etc., but excludes tractors, farm machinery and implements, earth-moving equipment, etc.

**Total value of retail sales, States**

**TOTAL VALUE OF RETAIL SALES (EXCLUDING MOTOR VEHICLES, PARTS, PETROL, ETC.)  
STATES, 1961-62 AND 1968-69 TO 1971-72  
(\$ million)**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.(a)</i>
1961-62 . . . . .	2,060.4	1,517.1	701.6	451.6	360.3	166.1	5,257.1
1968-69 . . . . .	3,026.9	2,301.2	1,069.2	706.9	651.5	240.9	7,996.6
1969-70 . . . . .	3,268.1	2,491.3	1,145.6	762.3	708.4	256.0	8,631.7
1970-71 . . . . .	3,500.8	2,680.0	1,240.0	818.8	778.2	272.1	9,289.9
1971-72 . . . . .	3,747.3	2,885.6	1,366.3	890.9	836.9	291.3	10,018.3

(a) Excludes Northern Territory and Australian Capital Territory.

**TOTAL VALUE OF RETAIL SALES OF MOTOR VEHICLES, PARTS, PETROL, ETC., STATES  
1961-62 AND 1968-69 TO 1971-72  
(\$ million)**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.(a)</i>
1961-62 . . . . .	623.1	431.2	218.0	143.1	133.9	53.9	1,603.2
1968-69 . . . . .	1,186.1	797.6	427.9	261.1	294.3	88.9	3,055.9
1969-70 . . . . .	1,329.9	888.1	465.2	285.7	320.3	102.0	3,391.2
1970-71 . . . . .	1,440.9	941.4	494.9	297.6	348.0	112.8	3,635.6
1971-72 . . . . .	1,538.9	1,006.3	562.7	322.5	354.3	126.0	3,910.7

(a) Excludes Northern Territory and Australian Capital Territory.

## INTERSTATE TRADE

Prior to the federation of the Australian Colonies (now States) each Colony published statistics of its trade with the other Colonies. A similar record was continued by the Commonwealth Government under the provisions of the Constitution (section 93). On the expiry of the 'bookkeeping' period these records were discontinued as from 13 September 1910, and the last published statements were for the year 1909. Later, the Governments of Western Australia and Tasmania revived the records, and relevant statistics are available again for those States. A detailed collection for Queensland was re-introduced from July 1953.

At the Conference of Statisticians held in January 1928 it was resolved that efforts should be made in other States to record the interstate movement of certain principal commodities. Complete interstate trade statistics are now published in detail for Queensland, Western Australia and Tasmania by the Deputy Commonwealth Statisticians in those States, and incomplete statistics, relating mainly to trade with Western Australia and Tasmania, by the Deputy Commonwealth Statisticians in the remaining States.

## STATISTICAL ORGANISATION IN AUSTRALIA

### Early development of Australian statistics

Statistical organisation in Australia has its origin in the 'Blue Books' which, in the Crown Colony days, were prepared annually for the information of the Colonial Office. Although intended primarily for administrative purposes, these documents were important sources of statistical data, and formed the basis from which later statistical publications were developed. Following the advent of responsible government, the 'Blue Book' was succeeded in all States by 'Statistical Registers' which, however, were still largely summaries of the 'by-product' statistics of government administrative departments.

The growing need for quantitative data concerning the progress of the several young communities of Australia led eventually to the appointment of official Statisticians commissioned to prepare and publish such data. Conferences were held between the Statisticians to allow for the interchange of ideas between States and to provide for uniform State statistics which could be aggregated to Australian totals. Altogether, six conferences were held prior to the formation of the Commonwealth Bureau of Census and Statistics in 1906—in 1861, 1875, 1890, 1900, 1902 and 1903. The holding of these conferences has been continued since the formation of the Commonwealth Bureau, and a representative from New Zealand attended up to 1928.

### Creation of the Commonwealth Bureau of Census and Statistics

Under the provisions of Section 51 of the Commonwealth Constitution, power is conferred on the Commonwealth Parliament 'to make laws for the peace, order, and good government of the Commonwealth with respect to . . .' (*inter alia*) '(XL) Census and Statistics'. Accordingly the *Census and Statistics Act* 1905 was passed, and in 1906 the Commonwealth Bureau of Census and Statistics was created. A conference of Statisticians in 1906 defined the relations between the Commonwealth and State Bureaux, and in each case the State Statistician became the representative in his own State of the Commonwealth Statistician for the purpose of administering the Commonwealth Act. In addition, each State had its own 'Statistics Act', and although these were not identical for all States, they embodied common principles. The Commonwealth Bureau did not attempt to duplicate the existing State statistical organisations, but endeavoured to use their services whenever possible, undertaking the initial collection of statistics only in fields not covered by the States, or in which efficiency demanded complete centralisation.

### Integration of statistical services

The creation and development of the Commonwealth Bureau of Census and Statistics, the frequent conferences of Commonwealth and State Statisticians, and the close and increasing liaison between officers dealing with the same subjects in the State and Commonwealth fields did much to promote uniformity in official statistics and methods employed in their collection throughout Australia. The complete realisation of this aim could not, however, be achieved with seven separate statistical systems, even with the utmost co-operation of those concerned. This became apparent when economic problems following the 1914-18 War drew attention to deficiencies in Australian statistical data.

The first step towards integration was taken in 1924, when, in response to a proposal by the Prime Minister to the Premiers' Conference that State and Commonwealth Statistical Bureaux be amalgamated, the Tasmanian office was transferred to the Commonwealth. (Other States did not agree to the proposal at that time.) The Tasmanian office has since functioned as a Commonwealth office which also serves State statistical needs.

The varied economic and social problems of the 1920's and 1930's, the 1939-45 War and the post-war boom, and the development during and since the war of a volume of new statistics, imposed a severe strain on the statistical systems and increased the complexities of the several administrations in their efforts to secure and maintain uniformity in statistical collections.

The difficulties of maintaining efficient statistical services were further emphasised during the immediate post-war years when the problems of planning for post-war reconstruction greatly increased the demand for current economic statistics. In 1949, discussions with the Premiers were initiated by the Prime Minister, with the object of integrating the statistical services of the Commonwealth and the States by agreement. Following negotiations, all State Governments accepted the terms of draft agreements to integrate their respective statistical offices with that of the Commonwealth, and effect was given to this by the *Statistics (Arrangements with States) Act 1956*. This legislation, permissive in nature, was designed to enable the Commonwealth to enter into an agreement with any State to effect an amalgamation of Commonwealth and State statistical offices and services. The object of such an agreement was to establish an integrated statistical service, with branches in each State, operated by Commonwealth statistical officers under the immediate direction of a Deputy Commonwealth Statistician who would hold office under both the Commonwealth and State Governments. Both Commonwealth and State were to be adequately served with statistics, and no State would be required to surrender its existing powers in the field of statistics. Integration of the Commonwealth and State statistical services was finally accomplished when the integration arrangement with Victoria came into effect on 15 September 1958.

The relationships which at present obtain between the Bureau and the several State Governments are a reflection of these agreements. Each State has retained its power to collect statistics under State laws, but the Commonwealth provides the staff and the funds, and is responsible for all statistical work required by both Commonwealth and State Governments. Conferences of the Commonwealth and Deputy Commonwealth Statisticians are held annually to discuss current and projected future operations of the Bureau.

Under the system as it now operates, Deputy Commonwealth Statisticians and their staffs provide the principal avenue of contact between State Government agencies and other State users and suppliers of statistical information. For the most part, negotiations with Commonwealth agencies and other national users and suppliers of statistical information are undertaken by the Commonwealth Statistician and his Central Office staff. However, the division of responsibility between the Bureau's Central and State Offices in the matter of relationships with users and suppliers of statistical information is by no means as precise as might be assumed from the above remarks. The statistical services are highly integrated and operate as one unit rather than as seven separate Bureaux. In general, it might be said that moves to develop new statistical series or to modify existing ones for State purposes are normally initiated by Deputy Statisticians, whereas moves to develop new or modified series for national socio-economic policy purposes are usually initiated by the Commonwealth Statistician.

### Scope of the Commonwealth Bureau of Census and Statistics

The scope of the Commonwealth Bureau of Census and Statistics has continually been widened. Additional requirements in the administrative, industrial, financial and scientific spheres have led to the development of many new statistical collections. All these activities are covered by the Census and Statistics Act, which empowers the Statistician to collect information and contains stringent provisions to ensure that the secrecy of information provided by individual persons and businesses is preserved.

In the Australian centralised official statistical service, it is recognised that there is a danger that official statisticians may become isolated from the thinking of the users of statistics and insensitive to the problems of the firms or individual persons whose responsibility it is to supply statistical information. The dangers inherent in this situation are for the most part obviated by the six State Offices of the Bureau keeping in very close contact with the individual businesses which use statistics and supply statistical information, and special steps are taken to ensure that users have adequate scope for expression of their needs and that requests by the Bureau for information are kept within reasonable and practical limits. The methods towards this end which have been adopted in the Bureau are reflected in its organisational structure. The organisation is on the basis of specialist subject-matter branches, and to each relatively narrow field of socio-economic activity there is a corresponding branch within the Bureau which is responsible for obtaining statistics and providing statistical services. Thus, in the Central Office, there are specialist branches dealing with primary industries; secondary industries; wholesale and retail trade; employment; finance; population and vital statistics, etc. A broadly similar organisational pattern exists in State Offices of the Bureau, although local requirements have naturally given rise to differences in detail.



### Organisation of the Central Office of the Commonwealth Bureau of Census and Statistics

The Central Office of the Bureau is organised functionally into the following branches, listed alphabetically. As shown below, these branches are further sub-divided into specialist subject matter sections.

*Demography and Employment Branch.* Demographic and Social; Employment and Field Survey Operations; Population Research.

*Manufacturing, Mining and Internal Trade Branch.* Internal Trade and Enterprise Statistics; Integration; Manufacturing and Mining.

*National Accounts and Public Finance Branch.* Public Finance and Taxation; National Income and Expenditure; Inter-industry and Sector Financial Accounts.

*Overseas Transactions Branch.* Balance of Payments; Overseas Trade and Shipping.

*Population Census Branch.* Classification Research; Field Organisation and Mapping; Operations.

*Prices and Labour Branch.* Labour and Retail Prices; Quantum Indexes and Wholesale Prices.

*Rural, Transport and Private Finance Branch.* Classification; Private Finance; Rural; Transport and Construction.

*Sampling and Methodology Branch.* Sampling; Methodology; Special Projects.

*Services Branch.* Establishments and Finance; Publications; Secretariat.

In addition to the above-mentioned branches, the Bureau's *Computer Service Centre* operates the largest computer network in Australia and one of the largest used for statistical purposes in the world. It comprises a Control Data 3600, 3500 and two 3300 computers in Canberra; 3300, 3200 and 160-A computers in Sydney and Melbourne; 3300 and 160-A computers in Adelaide; 3200 and 160-A computers in Brisbane; and 3200 computers in the remaining State capitals. All installations use a full complement of peripheral devices. Mass storage and interrogation facilities are available at Canberra, Sydney, Melbourne and Adelaide.

At 30 June 1972 the staff of the Bureau numbered 3,957, of whom 649 were university graduates. Of the total staff, 1,441 were employed in the Bureau's Central Office in Canberra. Expenditure for the year 1971-72 amounted to \$27,804,880.

### Relation of the Bureau to other Commonwealth Departments

The Commonwealth Statistician is the co-ordinating authority on all statistical activities in Commonwealth Departments, and where any new statistical field is to be established involving the regular collection of statistics, the Commonwealth Statistician must be consulted to ensure that they are necessary and that they are based on sound statistical methods; furthermore, the Commonwealth Statistician is empowered to make regular inspections of all statistical work undertaken in Departments to ensure that their needs are being met by the most economical means and without duplication of effort.

The Bureau provides methodological and general statistical advice to Commonwealth Departments and instrumentalities from time to time as required. However, for some Departments, which have a continuing need for specialised statistical services, the Bureau provides, from its own staff, the key personnel to serve these needs.

## STATISTICAL AND OTHER OFFICIAL PUBLICATIONS OF AUSTRALIA

The official statistical publications of Australia may be divided bibliographically into two main divisions, namely: (i) Commonwealth publications dealing both individually and collectively with the several States of Australia; and (ii) State publications dealing with individual States only. Commonwealth publications containing statistics may be grouped under two heads, namely: (i) publications issued by the Commonwealth Statistician; and (ii) Parliamentary and Departmental Reports and Papers. State publications may similarly be grouped into publications issued by the Deputy Commonwealth Statistician in each State, and State Parliamentary and Departmental Reports and Papers. The statistics contained in the second group in each case are in the main incidental to the primary purpose of the particular report or paper.

### Publications issued by the Commonwealth Statistician

#### Principal statistical publications issued to date

The following is a list of the principal statistical publications issued from the Central Office of the Commonwealth Bureau of Census and Statistics since its inauguration. Minor changes in titles have not been referred to. Copies of a number of these publications, particularly earlier issues, are not now available.



*Australian Capital Territory Statistical Summary.* Annually, 1963 to 1972.

*Balance of Payments.* Half-yearly, 1946-47 to 1971-72.

*Balance of Payments, Australia.* Statements Nos 1 to 3, 1928-29 to 1951-52.

*Banking and Currency.* Bulletin, annually, 1961-62 and 1962-63 (combined issue) to 1970-71.

† *Building and Construction.* Bulletin, annually, 1964-65 to 1969-70.

*Causes of Death.* Bulletin, annually, 1963 to 1969 and 1970 (combined issue).

*Census (1911) Results.* Bulletin. Vols I (Statistician's Report), II and III, with Appendix *Mathematical Theory of Population*.

*Census (1921) Results.* Bulletins, Nos 1 to 26. Parts I to XVI, forming Vol. I, and Parts XVII to XXIX (Part XXVII, Life Tables), forming, with the Statistician's Report, Vol. II.

*Census (1933) Results.* Bulletins, Nos 1 to 25. Parts I to XIV, forming Vol. I, Parts XV to XXVIII, forming Vol. II, and Parts XXIX to XXXVII, forming, with the Statistician's Report and Australian Life Tables, 1932-1934, Vol. III.

*Census (1947) Results.* Bulletins, Nos 1 to 25. Parts I to XVI, forming Vol. I, Parts XVII to XIX, forming Vol. II, and Parts XX to XXVIII, forming, with the Statistician's Report and Australian Life Tables, 1946-1948, Vol. III.

*Census (1954) Results.* Bulletins, Nos 1 to 3. Vols I to VI, comprising respectively Parts I to V for each State; Vol. VII, comprising Parts I to V for the Australian Territories; Vol. VIII, comprising Parts I to III for Australia, Australian Life Tables, 1953-1955, and the Statistician's Report.

*Census (1961) Results.* Vols I to VI, comprising respectively Parts I to V for each State; Vol. VII, comprising Parts I to V for the Australian Territories; and Vol. VIII, comprising Parts I to III for Australia, Australian Life Tables, 1960-1962, and the Statistician's Report.

*Census (1966) Results.* Summarised results for each State and Territory and for Australia have been published in a series of mimeographed bulletins available from the Commonwealth Statistician, and issue of the volumes containing the final figures is now almost complete. The volumes are Vol. I, comprising Parts I to II; Vol. 2, Parts I to V; Vol. 3; Vol. 4, Parts I to VII; and Vol. 5, Parts I to VIII.

*Census (1971) Results.* Mimeographed Field Count Statements have been issued showing preliminary population figures. Preliminary figures of dwellings and the characteristics of population are being issued progressively in mimeographed form, and will be followed by a series of bulletins containing final figures.

\* *Conference of British Commonwealth Statisticians, 1951, Report of Proceedings.*

\* *Dairying Industry* (formerly *Summary of Dairying Industry*). Bulletin, monthly and half-yearly; first issue, September 1937.

*Demography.* Bulletin, annually, 1911 to 1967 and 1968 (combined issue). Commencing 1963, excludes details of causes of death, *see Causes of Death*.

\* *Digest of Current Economic Statistics.* Monthly from August 1959 onward.

\* *Export Commodity Classification, Australian.* Annually, 1966-67 to 1971-72 (sectional revisions). *Exports, Australian.* Annually, 1958-59 to 1971-72.

\* *Factories, Principal Statistics, Summary.* Annually, 1948-49 to 1967-68.

*Finance.* Bulletin, 1907 to 1960-61. Commencing 1955-56, issued in two parts—Part I, Public and Private Finance; Part II, Commonwealth Taxation. Commencing 1961-62, issued as five separate bulletins, *see Banking, Finance (2), Insurance, and Taxation*.

*Finance, Commonwealth.* Bulletin, annually, 1961-62 and 1962-63 (combined issue) to 1969-70. (Commencing with the 1970-71 issue, title changed to *Public Authority Finance: Commonwealth Authorities*.)

*Finance, Public Authority.* Bulletin, annually, 1969-71 first issue.

‡ *Finance, Public Authority—Commonwealth Authorities.* Bulletin, annually, 1970-71 and 1971-72.

*Finance, State, Territory and Local Government Authorities, and Local Government Securities.* Bulletin, annually, 1961-62 and 1962-63 (combined issue) to 1967-68.

\* *Food Production and the Apparent Consumption of Foodstuffs and Nutrients, Report on.* Bulletin, half-yearly, 1946-47 to 1947-48; annually, 1948-49 to 1970-71.

- \**Fruit Growing Industry* (formerly *Summary of Fruit Growing Industry*). Bulletin, annually, 1944–45 to 1970–71.
- \**Import Commodity Classification, Australian*. Annually, 1965–66 to 1971–72 (sectional revisions).  
*Imports, Australian*. Bulletin, annually, 1967–68 and 1971–72.  
*Imports Cleared for Home Consumption*. Annually, 1950–51 to 1971–72.  
*Insurance and Other Private Finance (other than Banking and Currency)*. Bulletin, annually, 1961–62 and 1962–63 (combined issue) to 1967–68.  
*Labour and Industrial Statistics*. Memoranda and Reports, various, to 1922.  
*Labour Report*, 1913 to 1970.  
*Life Tables, Australian*, 1901–1910. *Australian Joint Life Tables*, 1901–1910.  
*Life Tables, Australian*, 1920–1922.  
*Life Tables, Australian*, 1932–1934. *Australian Joint Life Tables*, 1932–1934.  
*Life Tables, Australian*, 1946–1948.  
*Life Tables, Australian*, 1953–1955.  
*Life Tables, Australian*, 1960–1962.
- \**Livestock Statistics* (formerly *Summary of Livestock Statistics and Livestock Numbers*). Bulletin, annually, 1943 to 1971.  
*Local Government in Australia*, July 1919.  
*Manufacturing Commodities*. Bulletin, annually, 1963–64 and 1964–65 (combined issue) to 1966–67 and 1967–68 (combined issue).  
*Manufacturing Industries*. Bulletins on individual industries, annually, 1936–37 to 1939–40, 1940–41 (issue incomplete) and 1944–45 to 1967–68.  
*Manufacturing Industry*. Bulletin, annually, 1963–64 to 1967–68.  
*Manufacturing Industry, Australian, Overseas Participation in, Part I—Overseas Ownership and Part II—Overseas Control*, 1962–63 and 1966–67.
- §*Mineral Industry, The Australian* (formerly *Minerals and Metals Bulletin*). Part II—*Quarterly Statistics* of a quarterly bulletin issued jointly with the Bureau of Mineral Resources.  
*Mining Industry, Australian, Overseas Participation in*. Bulletin, annually, 1967, and 1968.  
*Monthly Review of Business Statistics*. October 1937 onward.  
*Motor Vehicles, Census of, 31st December 1955*. Bulletins, Nos. 1 to 8.  
*Motor Vehicles, Census of, 31st December 1962*. Bulletins, Nos 1 to 9.  
*Motor Vehicles, Survey of (1947–48), Results*. Bulletins, Nos 1 to 7.  
*National Accounts, Australian (National Income and Expenditure)*, 1948–49 to 1961–62, first issue, mimeographed\*, to 1970–71.
- ||*Non-rural Primary Industries*. Bulletin, annually, 1964–65 to 1967–68 and 1968–69 (combined issue).  
*Non-rural Primary Industries and Value of Production*. Bulletin, annually, 1962–63 and 1963–64. (Commencing 1964–65 issued as two separate Bulletins, see *Non-rural Primary Industries, and Value of Production*.)  
*Northern Territory Statistical Summary*. Annually, 1960 to 1972.
- \**Occupation Survey (1945) Results*. Detailed tables.  
*Official Year Book of the Commonwealth of Australia*. 1907 to present issue (No. 58). Issues Nos 40 to 51 also published in parts.  
*Pocket Compendium of Australian Statistics* (formerly *Statistical Digest*). 1913, 1914, 1916 and 1918 to 1972, annually.  
*Population and Vital Statistics*, Bulletins and Reports, various, 1906–1910.  
*Primary Industries*. Bulletins, annually, 1950–51 to 1961–62 in two parts—Part I, Rural Industries; Part II, Non-rural Primary Industries and Value of Production. Commencing 1962–63, issued as two separate Bulletins, see *Rural Industries* and *Non-rural Primary Industries and Value of Production*.

*Primary Industries, Australian*. Report prepared for the Empire Producers Conference, Sydney, March 1938.

*Production*. Bulletin, annually, 1906 to 1949–50. From 1936–37 to 1949–50 issued in two parts—Part I, Secondary Industries; Part II, Primary Industries (including Total Recorded Production); thereafter separate Bulletins (*see Primary Industries and Secondary Industries*).

*Professional Papers*. Various. A full list appears in Official Year Book No. 13, page 3.

\**Publications of the Commonwealth Bureau of Census and Statistics*. Annually since 1950.

*Quarterly Summary of Australian Statistics* (replaced *Monthly Summary of Australian Statistics*). December 1917 onward.

\**Retail Establishments, Census of (1947–48), Results*. Bulletins, Nos 1 to 7.

\**Retail Establishments, Census of (1948–49), Results*. Bulletins, Nos 1 to 7.

\**Retail Establishments, Census of (1952–53), Results*. Bulletins, Nos 1 to 14.

*Retail Establishments, Census of (1956–57), Results*. Bulletins, Nos 1 to 8 (mimeographed\*) and 9 to 15 (printed).

*Retail Establishments and Other Services, Census of (1961–62), Results*. Bulletins, Nos 1 to 7 (printed) and 8 to 9 (mimeographed\*).

\**Rural Holdings, Classification by Size and Type of Activity, 1959–60*. Bulletins, Nos 1 to 7.

*Rural Holdings, Classification by Size and Type of Activity, 1965–66*. Bulletins, Nos 1 to 7.

*Rural Holdings, Classification by Size and Type of Activity, 1968–69*. Bulletins, Nos 1 to 7.

*Rural Holdings, Size Classification of, 1955–56*. Bulletins, Nos 1 to 7.

*Rural Industries*. Bulletin, annually, 1962–63 to 1968–69.

\**Rural Land Use and Crop Production* (formerly *Summary of Crop Statistics*). Bulletin, annually, 1943–44 to 1970–71.

*Seasonally Adjusted Indicators*. Bulletin, annually, 1967 to 1972.

*Secondary Industries*. Bulletin, annually, 1950–51 to 1962–63 (commencing 1960–61 issued in two parts—Part I, Factory and Building Operations; Part II, Materials Used and Articles Produced in Factories). Commencing 1963–64 issued as separate bulletins, *see Manufacturing Industry, Manufacturing Commodities, and Building and Construction*.

*Social Insurance*. Report to the Hon. the Minister for Trade and Customs, 1910.

*Social Statistics*. Bulletin, 1907 to 1915 annually, and 1918.

*Superannuation for the Commonwealth Public Service*. Report to the Hon. the Minister for Home Affairs, 1910.

*Taxation Assessments, Commonwealth*, Annually, 1961–62 to 1970–71.

*Trade, Overseas*. Bulletin, annually, 1906 to 1971–72.

\**Trade, Overseas*. Preliminary Bulletin, annually, 1952–53 to 1971–72, in two parts—Part 1, Exports; Part 2, Imports. (*See also Exports, Australian; Imports, Australian; and Imports Cleared for Home Consumption.*)

*Transport and Communication*. Bulletin, 1906, 1908 to 1916 annually, 1919 to 1930 annually and 1932 to 1969–70 annually.

||*Value of Production*. Bulletin, annually, 1964–65 to 1968–69.

*Wealth*. The Private Wealth of Australia and its Growth as ascertained by various methods, together with a Report on the War Census in 1915.

\**Wheat Industry* (formerly *Summary of the Wheat Situation*). Bulletin, periodically; first issue, July 1936; now issued annually, 1970–71, and 1971–72 (Preliminary), with annual supplement, 1971–72 (Preliminary).

\**Wool Production and Utilisation*. Bulletin, annually, 1952–53 to 1970–71.

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\* Distributed by the Commonwealth Statistician—for methods of obtaining other publications still in print *see back of this volume*.

† Previously included in *Secondary Industries*, Part I—*Factory and Building Operations*.

‡ Prior to 1970–71 issue, title was *Commonwealth Finance*.

§ Copies available from the Bureau of Mineral Resources, Canberra and the Department of National Development, Melbourne and Sydney.

|| Included in *Non-rural Primary Industries and Value of Production* prior to 1964–65.



### Current or recent statistical publications

The Central and State offices of the Commonwealth Bureau of Census and Statistics issue approximately 2,300 publications (600 separate titles) in printed and mimeographed form annually. Information on these publications is contained in *Publications of the Commonwealth Bureau of Census and Statistics*, 1972, available free on request from the Commonwealth Statistician, Canberra. This contains a list of all Bureau publications, a subject index to show the Central Office publications in which information on the various subjects dealt with by the Bureau is to be found, and short descriptions of major Central Office publications. The information on issues in this publication is supplemented in monthly statements. At the end of this Year Book there is a list of the current printed publications of the Central Office of the Bureau: the prices shown after the number and year of issue are, in order, price excluding postage, and price including postage in Australia.

### Commonwealth and State Parliamentary and Departmental Reports and Papers

No comprehensive list of current publications of this nature is available, but the National Library of Australia issues a quarterly publication (with annual cumulation) *Australian Government Publications*, a list of official publications of the Commonwealth, States and Territories, compiled from records of material received by the Library during the year.

The Australian Government Publishing Service, Canberra, issues a monthly publication *Australian Government Publications*. This publication lists Commonwealth publications currently becoming available or in stock, showing the titles and prices of Parliamentary Papers, Parliamentary Debates (Hansard), records of Parliamentary proceedings, Acts, Statutory Rules, Ordinances, and departmental bulletins and reports issued annually or irregularly.

Australian Government publications may be purchased *through the post or over the counter* from the Commonwealth Sub-Treasury in Brisbane, Adelaide and Hobart and the Deputy Commonwealth Statistician in each State capital; *through the post* from Mail Order Sales, Australian Government Publishing Service, P.O. Box 84, Canberra, A.C.T. 2600; and *over the counter* from the A.G.P.S. Book Centres at 113 London Circuit, Canberra City; Bank House, 315 George Street, Sydney, N.S.W.; 347 Swanston Street, Melbourne, Vic.; and the Commonwealth Centre, 1 St Georges Terrace, Perth, W.A.

The National Library of Australia issues annually a publication *Australian Books*, a reprint of the 1966 issue of which is included on pages 1231–77 of Year Book No. 53. See the chapter Education, Cultural Activities and Research for further information concerning the National Library's publicising of Australian publications.

## METRIC CONVERSION FOR AUSTRALIA

### Weights and measures in Australia

Australia inherited the 'Imperial' system of weights and measures from the United Kingdom. The *Commonwealth of Australia Constitution Act* of 1900 provided the newly formed Commonwealth Parliament with powers to make laws governing weights and measures (Section 51 (xv)). This power was not exercised till 1948 when a *Weights and Measures (National Standards) Act* was passed. This Act provided '... for the establishment and use throughout Australia of uniform units of measurement, and uniform standards of measurement, of physical quantities ...'.

The Act transferred to the Commonwealth the power to specify particular units for particular purposes. In 1960, because it was felt that the States should be able to exercise certain of these powers, the 1948 Act was repealed and replaced by an Act which allowed the States to legislate in certain areas.

### The National Standards Commission

The need for an extensive and accurate system of weights and measures had been seen as far back as 1940 when the Commonwealth established the National Standards Laboratory under what is now the Commonwealth Scientific and Industrial Research Organisation. In response to the demands of wartime, and the increasing technological complexity of the postwar era, this Laboratory has played a vital role in the development and control of measurement standards.

The weights and measures legislation later introduced by the Commonwealth, legalised the many and diverse standards maintained in the Laboratory. Under the *Weights and Measures (National Standards) Act* 1960–1966, units are prescribed in the Commonwealth's *Weights and Measures*



(National Standards) Regulations. These cover a much wider range of units than those covered previously by State legislation, since they include all units required by modern technology for accurate measurement.

Significantly, this legislation includes a range of metric units as well as the imperial units in common use. It defines the imperial units used in Australia directly in terms of metric units which are identical with the internationally defined metric units. Thus, Australian imperial weights and measures are already closely related by definition to the metric system.

#### Commonwealth legal units

The Commonwealth legislation is intended to define those units which are legal for measurement. Section 7 of the above act states that the regulations may prescribe units of measurement of any physical quantity and those units shall be the sole legal unit of measurement of that quantity.

However, the use of such units for the purpose of trade is, in general, controlled by State legislation. Until 1972 the States had only permitted the use of the imperial units; consequently, goods sold in the shops in Australia had to be marked with their contents in imperial units. As a step towards the conversion, many goods may now (from September 1972) be sold in packages marked solely in metric units.

#### The decision to change

In April 1967, a Senate Select Committee was appointed to inquire into the metric system of weights and measures. Between then and May 1968, the Committee, under the chairmanship of Senator K. A. Laught, heard evidence, in all capital cities, from 141 witnesses, and received written submissions from 54 persons or organisations.

The Committee reported unanimous agreement that it was practicable and desirable for Australia to adopt the metric system of weights and measures at an early date. The Committee's findings included the following.

Evidence from a wide segment of the community overwhelmingly supported an early change to the sole use of the metric system and indicated that there would be no insuperable difficulties.

About 90 per cent of the world's population already use metric measurements and this use is increasing.

About 75 per cent of world trade is carried out in metric terms. Some 70 per cent of Australia's export trade is to countries using or converting to metric weights and measures. This proportion will increase as Australia's trade with Japan and South-East Asian countries grows.

A metric system would improve the teaching of mathematics and science, reduce errors and save time.

A metric system would provide an opportunity to improve industrial and manufacturing efficiency by rationalising existing practices and reducing unnecessary varieties in sizes and components.

Introduction of a metric system was widely regarded as a natural consequence of Australia's earlier conversion to decimal currency. The full advantages of decimal currency would not be experienced until decimal weights and measures were also used.

The Committee was satisfied that the ultimate benefits of conversion would greatly exceed the costs.

#### Metric Conversion Board

*The Metric Conversion Act 1970* was assented to on 12 June 1970 and stated as its object (in Section 5) 'to bring about progressively the use of the metric system of measurement in Australia as the sole system of measurement of physical quantities'. It provided the Minister with powers on behalf of the Commonwealth, to do such things, make such arrangements and enter into such agreements as he thinks conducive to the attainment of this objective, and it established the Metric Conversion Board. It extended to all the Territories of the Commonwealth except Papua New Guinea.

In most other countries that are presently converting to the metric system, a Board has been appointed to give guidance for the change. Thus in the United Kingdom the Metrication Board was appointed in 1969, in South Africa a Metrication Advisory Board was appointed in 1967, and in New Zealand a Metric Advisory Board was appointed in 1970.

The Metric Conversion Act provided for such a Board and on 1 July 1970 a Board of thirteen members was appointed under the chairmanship of Mr J. D. Norgard, B.E., F.A.S.A.S.M. (Met.). It comprises members who are experienced in many of the sectors for which conversion will be important. They are drawn from all States of the Commonwealth and include representatives of industry, commerce, the State and the Commonwealth.

### Committees of the Board

The Government has made it clear that the metric change will be predominantly voluntary. It will be planned and implemented by those who will themselves be affected by it. Accordingly, the Board's first major task was to establish a committee structure to assist in the development and implementation of conversion programmes. All the major activities within the community likely to be affected by metric conversion were identified. They were then grouped so that each activity group would have an Advisory Committee responsible for its conversion. Each Advisory Committee was supported by several Sector Committees. These comprised nominees from appropriate organisations, national associations and institutes, and Government departments. They were established to cover specific activities. Where a specific aspect of conversion requires detailed consideration a Panel may be appointed to report to a Sector Committee.

The Advisory Committees are each chaired by a Board Member and have the task of co-ordinating the programmes and proposals for conversion before submitting them to the Board for consideration for inclusion in overall conversion plans.

By June 1971, as indicated in the First Annual Report of the Board, all 11 Advisory Committees had been established. In all, more than 600 individual members, drawn from virtually all relevant business, professional, technical and government fields, had been appointed to Advisory and Sector Committees, filling some 800 committee positions.

The chart on page 1028 shows the present structure of the Board and its committees. This structure will be changed appropriately as conversion proceeds. Now that programmes have been prepared and issued the work of many sector committees is nearing completion.

### International system of units

In general Australia is adopting the International System of Units, commonly known by its abbreviation SI (*Système Internationale*). This is the system adopted by the International General Conference on Weights and Measures.

Many people are familiar with the centimetre-gram-second (CGS) system which has long been in use in physical science. Whilst the SI system closely resembles the CGS system, it is not identical with it. Many people living in Europe are familiar with many of the SI units but they also use units which are not part of the SI system. For example, such units as the dyne and the erg do not appear in the SI system.

The International System of Units comprises a set of seven base units, some supplementary units for angular measurement, and derived units. The base units are the metre (length), kilogram (mass), second (time), ampere (electrical current), kelvin (temperature), candela (luminous intensity), and mole (amount of substance). A striking advantage of SI over the older system is that there is only one SI unit for each physical quantity and also there are no odd multiplying factors to be remembered. Some of the derived units have special names (e.g. the joule, the watt) while for others the names are derived from the base units comprising them (e.g. the metre per second).

In addition, for larger or smaller amounts, decimal multiples or submultiples of the SI unit may be used. The names of each of these is obtained by combining a prefix with the name of the unit. The prefixes, with their symbols and values, are as follows:

Prefix	Symbol	Value
Commonly used:		
giga . . . . .	G	$10^9$
mega . . . . .	M	$10^6$
kilo . . . . .	k	$10^3$
centi . . . . .	c	$10^{-2}$
milli . . . . .	m	$10^{-3}$
micro . . . . .	$\mu$	$10^{-6}$
Less commonly used:		
tera . . . . .	T	$10^{12}$
hecto . . . . .	h	$10^2$
deka . . . . .	da	10
deci . . . . .	d	$10^{-1}$
nano . . . . .	n	$10^{-9}$
pico . . . . .	p	$10^{-12}$
femto . . . . .	f	$10^{-15}$
atto . . . . .	a	$10^{-18}$

NOTE. It is recommended that only multiples of  $10^3$  be used and except in special cases the prefixes hecto, deka, deci and centi should be avoided.

Some units are not decimally related to the basic SI units but are of such significance that their continued use is necessary. Notable examples are the minute and hour for time intervals, and the degree, minute and second for angular measurement. Other non-SI units such as the nautical mile (1,852 metres) are the subject of international agreements, so their use must be continued for limited applications. There are other non-SI units which are provided for practical purposes in the public interest: for example, car speeds are quoted in kilometres per hour rather than metres per second.

Special names of SI units which are being recommended by the Metric Conversion Board for general use include the litre ( $10^{-3}$  cubic metres), the tonne (1,000 kilograms) and the hectare (10,000 square metres). The millibar has been recommended for the measurement of pressure for meteorological purposes only, because of international meteorological practice. Non-SI units recommended for restricted use in particular industries only, include the nautical mile and knot for marine and aerial navigation and the kilowatt hour for the measurement of electrical energy.

The table on page 1029 lists the most important everyday metric units with some of the imperial units they will replace and the conversion factors.

### Programme and planning

Conversion is expected to proceed simultaneously throughout many different sectors of the community. Unlike the decimal currency change there will be no single starting or finishing date for the change. For some activities such as for pharmaceuticals, the change has already been made.

Each sector is developing a programme appropriate to its activities and circumstances, but in the process account must be taken of related activities in other sectors. The structure of Sector and Advisory Committees established by the Board is intended to facilitate the development of individual programmes, and their integration into an overall conversion programme.

The broad aim laid down by the Government in 1970 was that conversion should be substantially complete by 1980. Within this broad objective the following stages of implementation have been established:

1970-71	.	.	.	.	Planning and co-ordination
1972	.	.	.	.	Increasing public awareness
1973-75	.	.	.	.	Major implementation
1976	.	.	.	.	70-80 per cent of nation's activity to be converted.

Progress is generally on schedule. Programmes are being issued for many sectors of commerce and industry, while conversion has already been achieved in limited areas.

### Detailed programmes

Conversion has been completed in the following areas:

Clay bricks, meteorology (temperature forecasts), horse racing, packaged goods (sole metric marking permitted), customs-excise Tariffs, tide tables, wool sales (bulk), new land titles.

During 1972 conversion was initiated in the following areas:

Primary education, farm milk tanks, wholesale meat, wine industry (bulk), wheat, barley, coarse grains, sugar.

During 1973 conversion is expected to be complete in the following areas:

Advertising, bread, building and construction (design), concrete bricks, all primary and secondary education, flat glass manufacture, furniture, retail meat, wind speed forecasts, paper, pharmaceutical packaging, printing, plastics and chemicals, ready-mixed concrete, storage, transport freight rates, water and sewerage rates.

### References

- Report of the Senate Select Committee on the Metric System, Parliamentary Paper No. 19 of 1968.
- Metric Conversion for Australia*, Metric Conversion Board 1971.
- First Annual Report of the Metric Conversion Board for the year 1970-71, Parliamentary Paper No. 260.





## METRIC UNITS AND CONVERSION FACTORS

Quantity	Imperial unit	Metric unit	Conversion Factors	
			Imperial to Metric units	Metric to Imperial units
Length	inch (in)	millimetre (mm) <i>or</i> centimetre (cm)	1 in = 25.4 mm	1 cm = 0.394 in
	foot (ft)	centimetre (cm) <i>or</i> metre (m)	1 ft = 30.5 cm	1 m = 3.28 ft
	yard (yd)	metre (m)	1 yd = 0.914 m	1 m = 1.09 yd
	furlong (fur)	metre (m) <i>or</i> kilometre (km)	1 fur = 201 m	1 km = 4.97 fur
	mile	kilometre (km)	1 mile = 1.61 km	1 km = 0.621 mile
For navigation		international nautical mile (n mile)		1 n mile = 1852 m
Mass	ounce (oz)	gram (g)	1 oz = 28.3 g	1 g = 0.0353 oz
	pound (lb)	gram (g) <i>or</i> kilogram (kg)	1 lb = 454 g	1 kg = 2.20 lb
	stone	kilogram (kg)	1 stone = 6.35 kg	1 kg = 0.157 stone
	ton	tonne (t)	1 ton = 1.02 t	1 t = 0.984 ton
Area	square inch (in <sup>2</sup> )	square centimetre (cm <sup>2</sup> )	1 in <sup>2</sup> = 6.45 cm <sup>2</sup>	1 cm <sup>2</sup> = 0.155 in <sup>2</sup>
	square foot (ft <sup>2</sup> )	square centimetre (cm <sup>2</sup> ) <i>or</i> square metre (m <sup>2</sup> )	1 ft <sup>2</sup> = 929 cm <sup>2</sup>	1 m <sup>2</sup> = 10.8 ft <sup>2</sup>
	square yard (yd <sup>2</sup> )	square metre (m <sup>2</sup> )	1 yd <sup>2</sup> = 0.836 m <sup>2</sup>	1 m <sup>2</sup> = 1.20 yd <sup>2</sup>
	perch (p)	square metre (m <sup>2</sup> )	1 p = 25.3 m <sup>2</sup>	1 m <sup>2</sup> = 0.0395 p
	rood (rd)	hectare (ha)	1 rd = 0.101 ha	1 ha = 9.88 rd
	acre (ac)	hectare (ha)	1 ac = 0.405 ha	1 ha = 2.47 ac
	square mile	square kilometre (km <sup>2</sup> )	1 square mile = 2.59 km <sup>2</sup>	1 km <sup>2</sup> = 0.386 square mile
Volume	cubic inch (in <sup>3</sup> )	cubic centimetre (cm <sup>3</sup> )	1 in <sup>3</sup> = 16.4 cm <sup>3</sup>	1 cm <sup>3</sup> = 0.0610 in <sup>3</sup>
	cubic foot (ft <sup>3</sup> )	cubic metre (m <sup>3</sup> )	1 ft <sup>3</sup> = 0.0283 m <sup>3</sup>	1 m <sup>3</sup> = 35.3 ft <sup>3</sup>
	cubic yard (yd <sup>3</sup> )	cubic metre (m <sup>3</sup> )	1 yd <sup>3</sup> = 0.765 m <sup>3</sup>	1 m <sup>3</sup> = 1.31 yd <sup>3</sup>
	bushel (bus)	cubic metre (m <sup>3</sup> )	1 bus = 0.0364 m <sup>3</sup>	1 m <sup>3</sup> = 27.5 bus
Volume (fluids)	fluid ounce (fl oz)	millilitre (ml)	1 fl oz = 28.4 ml	1 ml = 0.0352 fl oz
	pint (pt)	millilitre (ml) <i>or</i> litre (l)	1 pt = 568 ml	1 litre = 1.76 pt
	gallon (gal)	litre (l) <i>or</i> cubic metre (m <sup>3</sup> )	1 gal = 4.55 litres	1 m <sup>3</sup> = 220 gal
	acre foot	cubic metre (m <sup>3</sup> ) <i>or</i> megalitre (Ml)	1 acre foot = 1230 m <sup>3</sup> = 1.23 Ml	1 Ml = 0.811 acre-foot
Force	pound-force (lbf)	newton (N)	1 lbf = 4.45 N	1 N = 0.225 lbf
	ton-force (tonf)	kilonewton (kN)	1 tonf = 9.96 kN	1 kN = 0.100 tonf
Pressure	pound per square inch (psi)	kilopascal (kPa)	1 psi = 6.89 kPa	1 kPa = 0.145 psi
	atmosphere (atm)	kilopascal (kPa) <i>or</i> megapascal (MPa)	1 atm = 101 kPa	1 MPa = 9.87 atm
	ton per square inch (ton/in <sup>2</sup> )	megapascal (MPa)	1 ton/in <sup>2</sup> = 15.4 MPa	1 MPa = 0.0647 ton/in <sup>2</sup>
	For meteorology			
	inch of mercury (inHg)	millibar (mb)	1 inHg = 33.9 mb	1 mb = 0.0295 inHg
				1 mb = 100 Pa
Speed				
	For navigation			
	mile per hour (mph)	kilometre per hour (km/h)	1 mph = 1.61 km/h	1 km/h = 0.621 mph
		knot (kn)		1 kn = 1.85 km/h
Temperature	degree Fahrenheit (°F)	degree Celsius (°C)	°C = $\frac{5}{9}(\text{°F} - 32)$	°F = $\frac{9 \times \text{°C}}{5} + 32$
Density				
	pound per cubic inch (lb/in <sup>3</sup> )	gram per cubic centimetre (g/cm <sup>3</sup> )	1 lb/in <sup>3</sup> = 27.7 g/cm <sup>3</sup>	1 g/cm <sup>3</sup> = 0.0361 lb/in <sup>3</sup>
		= tonne per cubic metre (t/m <sup>3</sup> )	1 lb/in <sup>3</sup> = 27.7 t/m <sup>3</sup>	1 t/m <sup>3</sup> = 0.0361 lb/in <sup>3</sup>
	ton per cubic yard	tonne per cubic metre (t/m <sup>3</sup> )	1 ton/yd <sup>3</sup> = 1.33 t/m <sup>3</sup>	1 t/m <sup>3</sup> = 0.752 ton/yd <sup>3</sup>
Energy	British thermal unit (Btu)	kilojoule (kJ)	1 Btu = 1.06 kJ	1 kJ = 0.948 Btu
	therm	megajoule (MJ)	1 therm = 106 MJ	1 MJ = 9.48 × 10 <sup>-3</sup> therm
For electrical energy		kilowatt hour (kWh)		1 kWh = 3.60 MJ
Power	horsepower (hp)	kilowatt (kW)	1 hp = 0.746 kW	1 kW = 1.34 hp
Time				
		second (s)		
		minute (min)		1 min = 60s
		hour (h)		1 h = 3600 s
Frequency	cycle per second (c/s)	hertz (Hz)	1 c/s = 1 Hz	1 Hz = 1 c/s
Angular velocity				
	revolution per minute (rpm)	radian per second (rad/s)	1 rpm = 0.105 rad/s	1 rad/s = 9.55 rpm
		revolution per minute (rpm)		



## STATISTICAL SUMMARY: AUSTRALIA

In earlier issues of the Year Book, it was the practice to include in the Statistical Summary figures for every tenth year of the period 1861 to 1901, plus the latest year for which data were available. In each subsequent issue the latest year available was substituted for the year immediately preceding it until the next tenth year had been reached, and the earliest year in the series was eliminated as space was needed. In consequence of this system no single issue of the Year Book contained a continuous yearly series.

In this and recent issues of the Year Book, this defect has been remedied in part by the inclusion of a continuous series back to the year 1941, with earlier tenth years back to 1901 (the National Accounts series on page 1040 has been carried back to 1900-01 in single years). In issue No. 39, pages xxviii-xxix, some of the series are shown for every tenth year from 1861 to 1941. There are, however, discrepancies between the original series and the series now published.

Breaks in series, preliminary figures, etc., are indicated by the symbols shown on page xiii of this Year Book.

## STATISTICAL SUMMARY: AUSTRALIA

### DEMOGRAPHY

Year ended 31 December—	Population(a)			Natural in- crease	Over- seas migration(b)	Marriages		Divorces (c) and judicial separations	Births		Deaths		Infant deaths	
	Males	Females	Persons			No.	Rate(d)		No.	Rate(d)	No.	Rate(d)	No.	Rate(e)
	'000	'000	'000	'000	'000	'000		No.	'000		'000		'000	
1901	2,005	1,820	3,825	56.6	17.8	28	7.3	398	103	27.2	46	12.2	10.7	103.6
1911	2,382	2,192	4,574	74.3	77.7	39	8.8	509	122	27.2	48	10.7	8.4	68.5
1921	2,799	2,712	5,511	82.1	17.3	47	8.6	1,490	136	25.0	54	9.9	9.0	65.7
1931	3,333	3,220	6,553	61.9	-10.8	39	6.0	1,969	119	18.2	57	8.7	5.0	42.1
			(f)	(g)							(h)	(h)		
1941	3,599	3,545	7,144	63.3	5.2	75	10.6	3,351	135	18.9	71	10.0	5.3	39.7
			(f)	(g)							(h)	(h)		
1943	3,648	3,621	7,270	74.8	1.3	68	9.4	4,686	149	20.6	74	10.3	5.4	36.3
			(f)	(g)							(h)	(h)		
1944	3,683	3,664	7,347	83.7	-2.2	68	9.3	5,691	153	21.0	70	9.5	4.8	31.3
			(f)	(g)							(h)	(h)		
1945	3,722	3,708	7,430	90.3	-2.6	63	8.5	7,213	161	21.7	70	9.5	4.7	29.4
			(f)	(g)							(h)	(h)		
1946	3,767	3,751	7,518	101.7	-15.1	79	10.6	7,235	176	23.6	75	10.0	5.1	29.0
			(f)	(g)							(h)	(h)		
1947	3,828	3,810	7,638	108.9	10.6	76	10.1	8,803	182	24.1	73	9.7	5.2	28.5
1948	3,909	3,884	7,792	101.1	55.1	75	9.7	7,253	178	23.1	77	10.0	4.9	27.8
1949	4,047	3,998	8,046	106.0	150.0	73	9.2	6,626	181	22.9	75	9.5	4.6	25.3
1950	4,191	4,116	8,307	112.4	152.5	76	9.2	7,428	191	23.3	78	9.6	4.7	24.5
1951	4,311	4,217	8,528	111.5	111.4	77	9.2	7,330	193	23.0	82	9.7	4.9	25.2
1952	4,426	4,314	8,740	120.1	94.0	74	8.6	7,110	202	23.4	82	9.5	4.8	23.8
1953	4,503	4,399	8,903	122.0	42.9	71	8.0	8,043	202	22.9	80	9.1	4.7	23.3
1954	4,598	4,492	9,090	120.5	68.2	71	7.9	6,528	202	22.5	82	9.1	4.5	22.5
1955	4,714	4,598	9,312	125.6	97.3	72	7.8	6,782	208	22.6	82	8.9	4.6	22.0
1956	4,829	4,702	9,531	126.0	94.0	72	7.6	6,492	212	22.5	86	9.1	4.6	21.7
1957	4,930	4,814	9,744	135.4	78.7	74	7.6	6,374	220	22.9	85	8.8	4.7	21.4
1958	5,026	4,921	9,947	138.8	65.4	74	7.5	6,994	223	22.6	84	8.5	4.6	20.5
1959	5,132	5,029	10,161	137.8	76.8	74	7.4	7,370	227	22.6	89	8.9	4.9	21.5
1960	5,253	5,139	10,392	141.9	90.1	75	7.3	6,709	230	22.4	88	8.6	4.6	20.2
	(i)	(i)	(i)	(i)										
1961	5,374	5,268	10,643	151.8	61.5	77	7.3	6,751	240	22.8	89	8.5	4.7	19.5
1962	5,470	5,376	10,846	144.4	62.5	79	7.4	7,290	237	22.2	93	8.7	4.8	20.4
1963	5,572	5,484	11,055	141.3	71.6	81	7.4	7,515	236	21.6	95	8.7	4.6	19.5
1964	5,683	5,597	11,280	129.1	99.3	86	7.7	7,967	229	20.6	101	9.0	4.4	19.1
1965	5,794	5,712	11,505	123.7	104.9	94	8.2	8,534	223	19.6	100	8.8	4.1	18.5
	(i)	(i)	(i)	(i)										
1966	5,891	5,814	11,705	119.2	86.9	96	8.3	9,921	224	19.3	105	9.0	4.2	18.7
1967	5,992	5,920	11,912	126.6	91.9	100	8.5	9,747	229	19.4	103	8.7	4.2	18.3
1968	6,108	6,037	12,146	131.4	113.1	106	8.8	10,791	241	20.0	110	9.1	4.3	17.8
1969	6,238	6,169	12,407	143.7	129.0	112	9.2	10,984	250	20.4	106	8.7	4.5	17.9
1970	6,365	6,299	12,663	144.5	122.9	116	9.3	12,249	258	20.6	113	9.0	4.6	17.9
1971	6,484	6,424	12,908	165.7	84.6	118	9.2	13,002	276	21.6	111	8.7	4.8	17.3

(a) At 31 December. (b) Excess of arrivals over departures. Minus sign (—) indicates excess of departures over arrivals. (c) Decrees made absolute, including decrees for nullity of marriage. (d) Number per 1,000 of mean population. (e) Number per 1,000 live births. (f) Excess of births over civilian deaths from September 1939 to June 1947. (g) Excludes movements of defence personnel from September 1939 to June 1947. (h) Excludes deaths of defence personnel from September 1939 to June 1947. (i) Includes Aborigines.

## PRIMARY INDUSTRIES

## AGRICULTURE

Season	Wheat			Oats			Barley			Maize		
	Area	Yield	Average yield	Area	Yield	Average yield	Area	Yield	Average yield	Area	Yield	Average yield
	mil. acres	mil. bus	bus	'000 acres	mil. bus	bus	'000 acres	mil. bus	bus	'000 acres	mil. bus	bus
1901-02	5.1	39	7.5	461	9.8	21.2	75	1.5	20.4	295	7.0	23.0
1911-12	7.4	72	9.6	617	9.6	15.5	116	2.1	17.7	340	8.9	26.0
1921-22	9.7	129	13.3	733	12.1	16.6	299	6.1	20.4	305	7.8	25.0
1931-32	14.7	191	12.9	1,085	15.2	14.0	342	6.3	18.4	269	7.1	26.0
1941-42	12.0	167	13.9	1,460	22.3	15.3	784	18.0	23.0	301	7.4	24.0
1943-44	7.9	110	13.9	1,415	17.7	12.5	443	7.6	17.1	283	7.4	26.0
1944-45	8.5	53	6.3	2,034	9.0	4.4	614	5.0	8.2	257	6.5	25.0
1945-46	11.4	142	12.5	1,949	25.8	13.2	699	11.1	15.9	236	5.7	24.0
1946-47	13.2	117	8.9	1,728	15.6	9.0	748	11.6	15.5	260	5.8	22.0
1947-48	13.9	220	15.9	2,105	40.7	19.3	839	20.9	24.9	223	6.2	27.0
1948-49	12.6	191	15.2	1,770	23.6	13.3	1,012	17.8	17.6	182	5.2	28.0
1949-50	12.2	218	17.8	1,748	27.4	14.3	1,040	19.5	18.8	194	6.0	31.0
1950-51	11.7	184	15.8	1,757	25.1	14.3	1,079	22.9	21.2	169	4.7	27.0
1951-52	10.4	160	15.4	2,365	34.5	15.8	1,118	21.9	19.6	170	4.0	23.0
1952-53	10.2	195	19.1	2,764	43.6	15.8	1,377	35.0	25.5	174	5.0	28.0
1953-54	10.8	198	18.4	2,764	33.0	15.4	1,803	41.3	22.9	179	5.1	28.0
1954-55	10.7	169	15.8	2,574	32.8	12.8	1,691	29.4	17.4	170	5.1	29.0
1955-56	10.2	195	19.2	3,354	56.5	16.8	1,894	41.7	22.0	167	4.8	28.0
1956-57	7.9	134	17.1	2,556	35.4	13.8	2,093	49.3	23.5	182	5.5	30.0
1957-58	8.8	98	11.0	2,959	31.4	10.6	2,121	30.5	14.4	184	5.6	30.0
1958-59	10.4	215	20.7	3,974	86.9	21.9	2,381	63.0	26.5	180	6.7	37.0
1959-60	12.2	199	16.3	3,030	46.8	15.5	2,379	34.2	14.3	185	6.7	36.0
1960-61	12.2	274	20.4	3,637	76.1	20.9	2,830	68.0	24.0	185	6.2	33.0
1961-62	14.7	247	16.8	3,097	55.1	17.8	2,383	41.5	17.4	211	7.3	34.0
1962-63	16.5	307	18.6	3,292	68.8	20.9	2,027	39.6	19.5	209	7.5	35.0
1963-64	16.5	328	19.9	3,392	68.2	20.1	2,013	43.4	21.6	215	6.7	31.0
1964-65	17.9	369	20.6	3,497	70.0	20.0	2,064	49.3	23.9	212	6.9	32.0
1965-66	17.5	260	14.8	3,768	60.7	16.1	2,298	41.8	18.2	197	4.9	25.0
1966-67	20.8	467	22.4	4,258	107.1	25.2	2,498	61.6	24.7	201	7.5	37.0
1967-68	22.4	277	12.4	3,380	39.6	11.7	2,611	36.8	14.1	200	7.1	35.0
1968-69	26.8	544	20.3	3,872	94.3	24.3	3,314	72.6	21.9	164	5.9	35.0
1969-70	23.4	388	16.5	3,396	68.7	20.2	3,759	74.9	19.9	197	7.5	38.0
1970-71	16.0	290	18.1	3,838	88.9	23.2	4,942	103.7	21.0	212	8.3	39.0
1971-72p	17.9	316	17.7	3,150	70.4	21.4	6,400	136.9	22.3	195		

## AGRICULTURE—continued

Season	Hay			Potatoes			Sugar-cane(a)			Vineyards		All crops
	Area	Yield	Average yield	Area	Yield	Average yield	Area	Yield	Average yield	Area	Wine made	Area
	'000 acres	'000 tons	tons	'000 acres	'000 tons	tons	'000 acres	'000 tons	tons	'000 acres	mil. gal	mil. acres
1901-02	1,688	2,025	1.20	110	323	2.94	87	1,368	15.7	64	5.3	8.4
1911-12	2,518	2,868	1.14	130	301	2.31	101	1,682	16.7	61	5.0	12.1
1921-22	2,995	3,902	1.30	149	388	2.60	128	2,437	19.0	92	8.5	15.4
1931-32	2,635	3,167	1.20	145	397	2.74	242	4,213	17.4	115	14.2	21.2
1941-42	2,758	3,575	1.30	99	333	3.35	255	5,154	20.3	130	15.6	(b)20.8
1943-44	2,044	2,717	1.33	192	599	3.12	229	3,688	16.1	129	19.1	(b)16.1
1944-45	2,409	1,994	0.83	242	881	3.64	226	4,598	20.3	129	13.9	(b)17.7
1945-46	2,757	3,493	1.27	176	646	3.67	236	4,718	20.0	129	24.9	(b)20.6
1946-47	2,006	2,357	1.18	145	544	3.76	227	4,027	17.7	130	32.0	(b)21.5
1947-48	1,970	3,008	1.53	146	498	3.42	222	4,418	19.9	132	32.9	(b)22.5
1948-49	1,580	2,292	1.45	120	460	3.84	266	6,708	25.2	135	32.8	(b)20.9
1949-50	1,605	2,430	1.51	134	471	3.52	281	6,849	24.3	135	32.7	(b)20.9
1950-51	1,377	2,063	1.50	127	412	3.24	272	7,052	25.9	137	26.0	(b)20.1
1951-52	1,549	2,345	1.51	118	509	4.31	282	5,327	18.9	136	35.3	(b)20.0
1952-53	1,761	2,765	1.57	135	431	3.18	280	6,967	24.9	137	30.0	(b)20.7
1953-54	1,935	3,049	1.58	128	548	4.27	340	9,014	26.5	138	31.7	(b)21.5
1954-55	1,984	2,856	1.44	107	468	4.36	374	10,087	27.0	136	24.0	22.3
1955-56	2,241	3,625	1.62	94	402	4.29	373	8,901	23.9	135	22.9	23.0
1956-57	1,861	3,043	1.63	101	519	5.14	370	9,272	25.1	132	30.8	20.0
1957-58	2,237	2,969	1.33	118	575	4.88	376	9,249	24.6	131	33.9	22.2
1958-59	3,018	5,090	1.69	105	575	5.49	370	10,213	27.6	131	32.6	25.6
1959-60	2,105	3,177	1.51	108	579	5.34	314	9,002	28.7	130	28.4	26.1
1960-61	2,973	5,079	1.71	92	451	4.91	341	9,166	26.9	131	33.8	29.6
1961-62	2,274	3,693	1.62	94	526	5.57	387	9,577	24.8	133	41.8	29.6
1962-63	2,720	4,717	1.73	114	667	5.86	402	12,736	31.7	134	29.9	32.1
1963-64	2,602	4,269	1.64	102	562	5.51	418	12,118	29.0	136	37.8	32.0
1964-65	2,793	4,963	1.78	88	508	5.78	470	15,070	32.0	139	38.9	34.7
1965-66	2,780	4,179	1.50	96	639	6.63	503	14,155	28.1	140	34.3	34.5
1966-67	3,496	6,371	1.82	99	643	6.47	557	16,685	29.9	139	41.7	39.6
1967-68	2,800	3,812	1.36	106	658	6.23	553	16,756	30.3	140	44.4	40.2
1968-69	3,955	7,328	1.85	113	798	7.04	568	18,413	32.4	143	52.1	46.9
1969-70	3,192	5,728	1.80	107	750	7.00	526	15,535	29.5	150	63.1	44.2
1970-71	3,362	6,044	1.80	95	735	7.71	545	17,366	31.9	158	55.3	39.4
1971-72p							575	19,080	33.2			

(a) Cane cut for crushing. (b) Excludes Northern Territory.



PRIMARY INDUSTRIES—continued  
PASTORAL, DAIRYING, ETC.

Year ended 30 June—	Livestock(a)				Meat(d)						
	Horses	Cattle	Sheep	Pigs	Wool (b)(c)	Butter	Cheese	Beef and veal	Mutton and lamb	Pigmeat	Total meat
	mil.	mil.	mil.	mil.	mil. lb	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons
1902 . . . . .	1.6	8.5	72	0.9	539	(e)46	(e)5.3	n.a.	n.a.	n.a.	n.a.
1912 . . . . .	2.3	11.8	97	1.1	798	(e)95	(e)7.1	n.a.	n.a.	n.a.	n.a.
1922 . . . . .	2.4	14.4	86	1.0	723	(e)119	(e)14.6	339	218	50	608
1932 . . . . .	1.8	12.3	111	1.2	1,007	175	14.0	350	307	70	727
1942 . . . . .	1.6	13.6	125	1.4	1,167	168	30.1	534	372	122	1,027
1944 . . . . .	1.4	14.2	123	1.7	1,169	156	35.8	501	429	114	1,043
1945 . . . . .	1.4	14.1	105	1.6	1,016	142	34.6	461	395	127	984
1946 . . . . .	1.3	13.9	96	1.4	936	150	41.2	407	291	108	805
1947 . . . . .	1.2	13.4	96	1.3	977	143	42.4	488	303	95	885
1948 . . . . .	1.2	13.8	103	1.3	1,005	162	41.5	562	295	90	947
1949 . . . . .	1.1	14.1	109	1.2	1,057	166	43.2	577	320	94	992
1950 . . . . .	1.1	14.6	113	1.1	1,142	174	44.8	607	358	90	1,055
1951 . . . . .	1.0	15.2	116	1.1	1,118	164	44.3	652	274	85	1,011
1952 . . . . .	0.9	14.9	118	1.0	1,080	135	40.6	582	282	85	949
1953 . . . . .	0.9	15.2	123	1.0	1,281	167	46.6	675	395	83	1,153
1954 . . . . .	0.8	15.6	127	1.2	1,245	160	49.1	704	365	84	1,153
1955 . . . . .	0.8	15.8	131	1.3	1,283	191	45.2	720	388	99	1,207
1956 . . . . .	0.8	16.5	139	1.2	1,417	209	38.7	751	380	94	1,225
1957 . . . . .	0.7	17.3	150	1.3	1,564	193	45.2	815	367	89	1,270
1958 . . . . .	0.7	16.9	149	1.4	1,434	176	36.0	791	421	102	1,315
1959 . . . . .	0.7	16.3	153	1.3	1,591	194	43.5	906	492	102	1,501
1960 . . . . .	0.6	16.5	155	1.4	1,680	198	44.9	752	573	101	1,426
1961 . . . . .	0.6	17.3	153	1.6	1,625	182	47.1	633	574	107	1,315
1962 . . . . .	0.6	18.0	158	1.7	1,699	199	55.7	791	587	120	1,498
1963 . . . . .	0.5	18.5	159	1.4	1,673	202	58.7	914	593	114	1,622
1964 . . . . .	0.5	19.1	165	1.5	1,785	204	58.2	985	586	111	1,683
1965 . . . . .	0.5	18.8	171	1.7	1,784	203	61.6	1,010	585	120	1,715
1966 . . . . .	n.a.	17.9	158	1.7	1,663	206	58.6	931	599	133	1,663
1967 . . . . .	0.5	18.3	164	1.8	1,762	218	68.7	865	587	140	1,591
1968 . . . . .	n.a.	19.2	167	2.1	1,770	193	69.4	890	654	147	1,691
1969 . . . . .	n.a.	20.6	175	2.3	1,948	196	73.6	920	669	160	1,749
1970 . . . . .	0.5	22.2	180	2.4	2,036	221	75.1	994	743	172	1,909
1971 . . . . .	n.a.	24.4	178	2.6	1,952	200	76.3	1,031	812	179	2,022
1972p . . . . .	n.a.	27.4	163	3.2	1,916	193	77.9	1,146	933	191	2,270

(a) At 31 December of previous year for years to 1942, at 31 March thereafter. (b) In terms of greasy. (c) 1901-02 and 1911-12, year ended previous December; then until 1946-47, year ended March; 1947-48 onwards, year ended June. (d) Carcass weight in terms of fresh meat. (e) Year ended previous December.

## MINERALS

## FORESTRY

Year ended 31 December—										
	Copper(a)	Gold(a)	Lead(a)	Zinc(a)	Iron ore	Black and Brown coal	Crude oil	Year ended 30 June—	Sawn output of Aust. grown timber	
	'000 tons	'000 fine oz	'000 tons	'000 tons	mil. tons	mil. tons	mil. bls		mil. super feet	
1901 . . . . .	29.4	3,300	n.a.	(b)	n.a.	6.9	..	1902	(c)452	
1911 . . . . .	45.3	2,484	221.7	238.1	(b)	10.5	..	1912	(c)605	
1921 . . . . .	11.0	758	81.0	139.5	0.7	12.9	..	1922	590	
1931 . . . . .	13.6	595	148.4	74.2	(b)	10.6	..	1932	237	
1941 . . . . .	22.4	1,497	291.1	247.2	2.4	18.8	..	1942	914	
1942 . . . . .	21.1	1,154	261.7	220.7	2.5	19.8	..	1944	850	
1944 . . . . .	29.8	657	188.8	173.7	2.3	18.7	..	1945	842	
1945 . . . . .	26.1	657	162.8	150.3	1.6	18.2	..	1946	895	
1946 . . . . .	18.8	824	181.4	172.0	1.8	19.6	..	1947	1,050	
1947 . . . . .	14.0	938	192.9	182.5	2.2	21.0	..	1948	1,117	
1948 . . . . .	12.6	886	210.2	190.7	2.1	21.5	..	1949	1,184	
1949 . . . . .	13.7	889	211.8	191.6	1.5	21.5	..	1950	1,223	
1950 . . . . .	17.6	870	225.4	197.8	2.4	23.9	..	1951	1,261	
1951 . . . . .	18.1	896	212.0	189.2	2.4	25.4	..	1952	1,393	
1952 . . . . .	18.9	980	228.3	196.5	2.9	27.5	..	1953	1,340	
1953 . . . . .	37.5	1,075	269.3	239.4	3.3	26.7	..	1954	1,400	
1954 . . . . .	41.9	1,118	284.9	252.7	3.5	29.1	..	1955	1,449	
1955 . . . . .	47.3	1,049	295.9	256.6	3.6	29.4	..	1956	1,451	
1956 . . . . .	54.5	1,030	299.5	278.1	3.9	29.8	..	1957	1,419	
1957 . . . . .	59.3	1,084	333.8	318.9	3.8	30.7	..	1958	1,391	
1958 . . . . .	75.7	1,104	328.3	293.7	3.9	32.1	..	1959	1,460	
1959 . . . . .	95.0	1,085	316.3	275.4	4.1	33.3	..	1960	1,521	
1960 . . . . .	109.4	1,087	308.2	317.5	4.4	37.5	..	1961	1,418	
1961 . . . . .	95.6	1,076	269.7	311.2	5.3	40.3	..	1962	1,352	
1962 . . . . .	107.0	1,069	370.1	337.5	4.8	41.6	..	1963	1,416	
1963 . . . . .	113.0	1,024	410.3	351.5	5.5	43.3	..	1964	1,487	
1964 . . . . .	104.1	964	374.9	344.6	5.7	46.4	1.2	1965	1,532	
1965 . . . . .	90.4	878	362.1	349.2	6.7	52.1	2.6	1966	1,508	
1966 . . . . .	109.5	917	364.9	369.3	10.9	55.1	3.4	1967	1,473	
1967 . . . . .	90.4	805	375.8	400.5	17.0	58.1	7.6	1968	1,473	
1968 . . . . .	107.9	782	382.7	415.7	26.2	63.2	13.9	1969	(d)1,384	
1969p(e) . . . . .	122.8	730	391.5	437.4	32.0	65.8	14.1	1970p	1,483	
1970p(e) . . . . .	140.0	663	452.1	488.2	44.5	71.7	30.6	1971p	1,457	
1971p(e) . . . . .	170.2	614	409.9	437.1	56.2	71.7	93.9	1972p	1,452	

(a) Metallic content of minerals produced. (b) Less than 0.05. (c) Year ended previous December. (d) Excludes estimated quantity of timber from logs peeled or sliced for veneers. (e) Year ended 30 June.

## SECONDARY INDUSTRIES

## FACORIES(a)

Year ended 30 June—	Number	Persons employed (b)	Salaries and wages paid(c)	Net value of production(d)						Value of			
				Chemicals, etc.	Industrial metals, etc.	Textiles etc.	Clothing	Food etc.	Paper, etc.	All groups	Plant and machinery(e)	Land and buildings(e)	
	'000 (g)	'000 (g)	\$m (g)	\$m n.a.	\$m n.a.	\$m n.a.	\$m n.a.	\$m n.a.	\$m n.a.	\$m 58.2	\$m n.a.	\$m n.a.	\$m n.a.
1902(f).													
1912(f).	14.5	312	55	2.2	24.1		15.0	23.6	8.5	108.3	63.2	65.0	
1922	18.0	379	136	6.4	47.2		38.4	54.4	18.0	225.0	156.2	134.6	
1932	21.7	337	112	15.8	45.6		13.8	57.4	19.2	222.0	243.1	213.2	
1942	27.0	725	360	59.6	239.8		42.0	106.4	34.2	633.0	338.4	312.7	
1946	31.2	745	412	45.2	259.4		44.1	124.0	41.0	704.6	371.1	373.2	
1947	34.8	805	474	49.0	292.8		53.9	138.3	52.2	821.7	379.4	386.9	
1948	37.4	849	572	57.3	362.6		64.2	156.3	59.2	978.6	427.4	422.3	
1949	40.1	890	678	67.1	421.7		71.7	179.6	70.6	1,137.5	493.0	465.5	
1950	41.6	917	772	81.3	492.5		85.9	202.0	86.0	1,323.1	571.2	519.1	
1951	43.1	969	983	105.4	654.0		109.2	236.6	109.5	1,687.7	673.2	605.6	
1952	45.8	978	1,224	127.4	826.2		113.2	282.2	136.4	2,049.7	820.3	719.0	
1953	47.7	933	1,270	135.7	842.6		129.7	328.7	136.6	2,165.7	987.1	828.9	
1954	49.6	990	1,410	164.6	936.6		157.1	355.8	158.6	2,454.1	1,161.4	966.9	
1955	51.1	1,031	1,563	196.3	1,065.9		156.8	373.1	181.1	2,731.0	1,396.6	1,112.0	
1956	52.4	1,060	1,707	238.3	1,193.9		163.6	395.6	198.1	3,001.4	1,595.7	1,307.1	
1957	53.2	1,063	1,782	273.8	1,281.7		182.9	428.9	217.4	3,244.2	1,834.1	1,519.4	
1958	54.0	1,074	1,859	291.3	1,389.0		183.0	449.9	241.4	3,457.4	2,025.5	1,698.1	
1959	54.9	1,088	1,941	322.4	1,471.6		191.3	469.1	263.4	3,685.2	2,216.8	1,895.8	
1960	56.7	1,132	2,173	360.3	1,700.4		216.7	520.1	298.2	4,161.1	2,443.2	2,129.2	
1961	57.8	1,145	2,289	366.1	1,795.9		213.6	542.5	318.6	4,349.8	2,785.6	2,389.1	
1962	58.5	1,121	2,287	364.3	1,770.3		211.2	495.5	326.9	4,394.6	3,052.1	2,809.6	
1963	59.1	1,168	2,447	411.4	1,954.7		233.8	636.9	350.9	4,795.2	3,286.5	3,006.8	
1964	59.4	1,210	2,652	449.5	2,174.0		252.5	700.5	379.7	5,270.0	3,480.7	3,204.7	
1965	61.0	1,269	2,994	504.8	2,486.1		279.6	757.1	426.9	5,896.8	3,766.3	3,505.9	
1966	61.7	1,294	3,163	542.7	2,647.8		282.8	818.3	459.5	6,251.9	4,154.7	3,776.6	
1967	62.5	1,309	3,408	627.6	2,912.9		303.1	892.3	503.3	6,877.0	4,706.8	4,061.2	
1968	63.0	1,331	3,666	687.0	3,163.6		315.0	937.5	549.0	7,430.9	4,962.2	4,303.2	
1969(h).	38.8	1,320	3,997	636.6	3,249.6		706.3	1,208.3	660.4	7,589.0	n.a.	n.a.	

(a) Excludes Northern Territory and Australian Capital Territory before 1 July 1964. (b) Average over whole year; includes working proprietors. (c) Excludes amounts drawn by working proprietors. (d) Value added in process of manufacture (i.e. value of output less value of materials and fuel used). (e) Depreciated or book value at end of year, including estimated value of rented premises and machinery. (f) Year ended previous December. (g) Owing to variation in classification, effective comparison is not possible. (h) Preliminary results of the Manufacturing Census, 1968-69. Direct comparisons with figures for previous years are not possible (for details, see page 719).

## PRIMARY AND SECONDARY INDUSTRIES

## NET VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES(a)

Year ended 30 June—	Crop pro- duction	Pastoral	Dairying	Poultry	Bee- farming	Total Agri- culture	Hunting	Forestry
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1902	47.6	54.4	15.2	4.0	0.2	121.4	n.a.	(b) 5.6
1912	77.6	105.4	32.2	8.0	0.2	223.4	n.a.	9.6
1922	163.8	150.2	70.6	18.0	0.2	402.8	n.a.	18.2
1932	99.4	86.0	45.2	11.4	0.2	242.2	3.0	7.8
1942	128.0	170.8	68.6	13.0	0.8	381.2	10.0	20.4
1944	165.3	216.8	89.7	25.4	0.8	488.1	13.4	23.0
1945	140.7	196.9	92.4	29.6	1.0	460.6	12.4	23.1
1946	219.1	172.6	99.1	30.3	0.8	521.8	17.1	25.1
1947	206.5	260.4	99.7	29.4	1.7	597.7	18.8	29.4
1948	451.6	387.7	121.1	33.5	1.5	995.4	14.6	35.5
1949	328.7	481.7	135.1	40.4	3.0	989.0	15.6	40.6
1950	437.4	674.2	162.2	44.5	1.5	1,319.8	11.4	46.4
1951	416.3	1,409.6	178.7	49.2	1.7	2,055.5	13.3	56.9
1952	493.4	801.0	207.6	63.1	1.5	1,566.6	13.4	75.8
1953	552.8	987.5	271.5	70.4	2.1	1,884.3	11.2	80.1
1954	536.9	983.4	273.9	69.6	2.9	1,866.7	10.1	88.0
1955	487.8	922.9	271.6	59.6	2.8	1,744.7	9.9	93.2
1956	558.9	893.6	309.8	60.4	3.5	1,826.2	12.1	103.6
1957	509.7	1,195.4	281.6	56.8	4.5	2,048.0	12.0	108.3
1958	489.1	894.5	255.2	54.7	3.1	1,696.6	12.1	106.9
1959	657.9	887.2	283.9	54.7	3.2	1,886.9	12.7	108.7
1960	583.9	1,072.4	304.4	60.8	4.1	2,025.7	12.8	102.7
1961	783.7	916.3	284.3	62.0	2.9	2,049.2	13.2	99.0
1962	733.0	962.7	273.0	49.7	3.2	2,021.6	11.8	92.3
1963	830.4	1,057.2	307.4	52.8	3.0	2,250.8	11.4	93.5
1964	917.4	1,316.0	330.2	61.5	5.1	2,630.3	13.4	99.1
1965	975.2	1,194.4	360.7	50.9	4.1	2,585.4	13.1	107.4
1966	857.9	1,159.5	349.9	62.6	3.5	2,433.4	13.8	110.8
1967	1,209.0	1,181.8	371.9	67.2	3.3	2,380.2	11.9	108.7
1968	899.4	1,044.4	371.3	61.2	3.8	2,380.2	10.5	109.8
1969	1,208.9	1,195.0	381.2	68.4	2.6	2,856.1	10.6	110.3
1970	1,015.6	1,204.4	418.9	81.4	4.4	2,724.8	11.2	117.8
1971	1,069.8	998.2	436.3	83.3	4.2	2,591.8	9.0	128.1

(a) Gross value, 1901 to 1921-22. Before 1922, year ended previous December.

(b) Includes Fisheries.

**PRIMARY AND SECONDARY INDUSTRIES—continued**      **BUILDING**  
**NET VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES(a)—continued**

Year ended 30 June—	Fishing	Total primary excluding mining (d)	Mining and quarrying	Factories	Grand total	New houses and flats completed(b)		Value of work done on all new buildings(c)
						number	Value	
		\$m	\$m	\$m	\$m	'000	\$m	\$m
1902 . . . . .		(d) 127.0		44.0	(e) 58.2	229.2	n.a.	n.a.
1912 . . . . .	2.2	235.2		46.6	(e) 108.3	390.1	n.a.	n.a.
1922 . . . . .	2.8	423.8		40.0	225.0	688.8	n.a.	n.a.
1932 . . . . .	2.8	255.8		27.0	220.0	504.8	n.a.	n.a.
1942 . . . . .	3.6	415.2		66.8	633.0	1,115.0	n.a.	n.a.
1944 . . . . .	3.9	538.4		55.2	732.5	1,326.0	n.a.	n.a.
1945 . . . . .	4.5	500.6		53.7	724.6	1,278.8	n.a.	n.a.
1946 . . . . .	5.2	569.2		52.5	704.6	1,326.4	15.4	29.0
1947 . . . . .	6.6	652.5		65.0	821.7	1,539.2	32.9	72.1
1948 . . . . .	7.0	1,052.5		85.2	978.6	2,116.3	44.3	108.6
1949 . . . . .	8.3	1,053.5		96.7	1,137.5	2,287.7	52.7	150.9
1950 . . . . .	8.5	1,386.1		104.7	1,323.1	2,813.8	57.0	184.7
1951 . . . . .	9.7	2,135.4		142.3	1,687.7	3,965.4	69.3	255.6
1952 . . . . .	11.5	1,667.3		194.4	2,049.7	3,911.4	80.1	354.1
1953 . . . . .	13.8	1,989.4		219.3	2,165.7	4,374.5	80.2	394.5
1954 . . . . .	15.5	1,980.3		209.8	2,454.1	4,644.2	77.6	398.2
1955 . . . . .	17.5	1,865.3		236.2	2,731.0	4,832.5	82.1	444.2
1956 . . . . .	17.8	1,959.7		265.0	3,001.4	5,226.1	78.5	452.5
1957 . . . . .	21.0	2,189.3		280.0	3,244.2	5,713.5	68.4	419.5
1958 . . . . .	20.8	1,836.4		253.6	3,457.4	5,547.4	74.6	463.0
1959 . . . . .	22.5	2,030.8		236.7	3,685.2	5,952.7	84.2	527.3
1960 . . . . .	24.7	2,166.9		252.3	4,161.1	6,580.2	90.0	571.0
1961 . . . . .	25.6	2,187.0		278.1	4,349.8	6,815.0	94.5	627.4
1962 . . . . .	28.6	2,154.3		274.5	4,394.6	6,823.5	86.3	593.2
1963 . . . . .	30.6	2,386.3		291.0	4,795.2	7,472.6	87.7	610.2
1964 . . . . .	31.7	2,774.5		327.7	5,270.0	8,372.1	96.7	685.8
1965 . . . . .	38.7	2,744.6		400.1	5,896.8	9,041.4	112.7	823.0
1966 . . . . .	41.7	2,599.7		443.9	6,251.9	9,295.7	112.8	869.9
1967 . . . . .	44.6	2,998.5		515.5	6,877.0	10,390.8	111.9	914.8
1968 . . . . .	54.0	2,554.5		568.1	7,430.9	10,553.5	120.2	1,022.8
1969 . . . . .	58.7	3,035.6	700.3	(f) 7,473.5		130.7	1,182.1	2,195.4
1970 . . . . .	58.5	2,912.3		(f) 8,263.7		142.2	1,379.4	2,556.7
1971 . . . . .	72.9	2,802.6				141.4	1,466.0	2,815.6
1972 . . . . .						142.8	1,609.2	3,132.4

(a) Gross value, 1901 to 1921–22. Before 1922, year ended previous December. Partly estimated before July 1951, and excludes Northern Territory before July 1954. (b) Series commenced 1945–46. (c) Building by private contractors, government authorities and owner builders. (d) Included in Forestry. (e) Year ended previous December. (f) Value added from 1968–69.

### WAGES AND PRICES

Year ended 31 December—	Weekly wage rates index adult males(a)	Retail price index numbers, six State capital cities combined(b)	Year ended 31 December—	Weekly wage rates index adult males(a)	Retail price index numbers, six State capital cities combined(b)
1901 . . . . .	n.a.	88	1954 . . . . .	101.6	386
1911 . . . . .	n.a.	100	1955 . . . . .	105.2	394
1921 . . . . .	n.a.	(c) 168	1956 . . . . .	110.8	419
1931 . . . . .	n.a.	145	1957 . . . . .	112.4	429
1941 . . . . .	38.5	167	1958 . . . . .	114.3	435
1942 . . . . .	41.6	181	1959 . . . . .	122.0	443
1943 . . . . .	42.5	188	1960 . . . . .	125.7	459
1944 . . . . .	42.6	187	1961 . . . . .	129.5	471
1945 . . . . .	42.7	187	1962 . . . . .	129.8	469
1946 . . . . .	45.7	190	1963 . . . . .	133.0	472
1947 . . . . .	49.8	198	1964 . . . . .	140.4	483
1948 . . . . .	55.4	218	1965 . . . . .	144.3	502
1949 . . . . .	59.7	240	1966 . . . . .	152.4	517
1950 . . . . .	71.5	262	1967 . . . . .	159.3	534
1951 . . . . .	85.8	313	1968 . . . . .	173.4	548
1952 . . . . .	96.7	367	1969 . . . . .	183.6	564
1953 . . . . .	99.2	383	1970 . . . . .	191.9	586
			1971 . . . . .	217.5p	621

(a) At 31 December. Base: year 1954 = 100, weighted average. Excludes rural industry. (b) Base: year 1911 = 100. The index numbers are presented as a continuous series, but they give only a broad indication of long-term trends in retail price levels. They are derived by linking a number of indexes that differ greatly in scope. The successive indexes used are: from 1901 to 1914, the 'A' Series Retail Price Index; from 1914 to 1946–47, the 'C' Series Retail Price Index; from 1946–47 to 1948–49, a composite of Consumer Price Index Housing Group (partly estimated) and 'C' Series Index excluding Rent; and from 1948–49 onwards, the Consumer Price Index. (c) November.

## OVERSEAS TRADE

## TOTALS

## PRINCIPAL EXPORTS(a)

Year ended 30 June—	TOTALS		PRINCIPAL EXPORTS(a)					
	Imports	Exports	Wool		Wheat		Flour(b)	
			Quantity	Value	Quantity	Value	Quantity	Value
	\$m	\$m	mil. lb(c)	\$m	'000	\$m	'000	\$m
	f.o.b.	f.o.b.		f.o.b.	f.o.b.	f.o.b.	short tons	f.o.b.
1902(d)	76	100	387.5	30	543	5.6	97	1.2
1912(d)	122	158	728.1	52	873	12.8	176	2.8
1922	188	256	971.3	96	2,677	57.2	360	11.0
1932	104	216	941.6	74	3,413	38.4	611	7.6
1942	348	338	939.8	112	598	9.2	414	8.4
1944	489	293	598.6	85	902	16.5	591	13.4
1945	430	311	683.5	92	868	19.5	560	13.5
1946	358	447	930.9	132	334	12.4	519	22.7
1947	419	618	1,454.6	244	326	12.7	765	45.1
1948	679	820	1,132.9	289	1,612	105.6	784	63.6
1949	830	1,085	1,324.9	454	2,224	129.4	855	67.4
1950	1,076	1,227	1,427.4	618	2,101	124.3	771	52.7
1951	1,488	1,964	1,193.7	1,253	2,309	148.3	883	65.8
1952	2,107	1,350	1,041.3	636	1,685	110.6	789	66.0
1953	1,028	1,743	1,207.7	788	1,594	103.9	870	74.8
1954	1,363	1,657	1,206.0	805	966	61.9	761	59.4
1955	1,687	1,548	1,182.8	693	1,691	90.4	656	40.6
1956	1,642	1,564	1,295.8	653	1,903	92.9	667	39.4
1957	1,438	1,986	1,450.8	930	2,440	120.1	750	43.3
1958	1,584	1,636	1,329.7	720	1,060	57.0	460	28.7
1959	1,593	1,623	1,448.7	578	1,463	76.8	447	26.7
1960	1,854	1,875	1,592.6	742	2,444	123.4	536	30.3
1961	2,175	1,938	1,557.7	649	4,098	204.9	658	38.0
1962	1,769	2,155	1,628.7	720	5,442	284.9	579	34.8
1963	2,163	2,152	1,594.3	733	4,071	216.9	524	31.4
1964	2,373	2,782	1,669.6	926	6,796	362.0	685	42.2
1965	2,905	2,651	1,605.3	781	5,624	297.2	572	37.3
1966	2,939	2,721	1,601.5	757	5,075	264.1	390	24.8
1967	3,045	3,024	1,632.1	840	6,403	361.2	357	23.1
1968	3,264	3,045	1,683.0	739	6,396	342.7	381	23.5
1969	3,469	3,374	1,760.6	827	4,814	258.3	350	21.8
1970	3,881	4,135	1,883.2	803	6,777	337.6	329	21.2
1971	4,150	4,375	1,721.8	575	8,932	433.0	306	19.6
1972	4,008	4,896	1,862.8	582	8,326	418.5	181	12.6

(a) Australian produce. (b) Flour, plain white. (c) Greasy equivalent (includes greasy wool, slipe, wool scoured and carbonised, wool exported on skins). (d) Year ended previous December.

## PRINCIPAL EXPORTS(a)—continued

Year ended 30 June—	Butter(b)		Hides and skins		Meats(c)		Fruit(d)		Sugar		Gold		Ores and concentrates	
	Quantity	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value
	mil. lb	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
		f.o.b.	f.o.b.	f.o.b.	f.o.b.	f.o.b.	f.o.b.	f.o.b.	f.o.b.	f.o.b.	f.o.b.	f.o.b.	f.o.b.	f.o.b.
1902(f)	35	2.8	2.6	5.2	0.4	(g)	28.6	..	(g)					
1912(f)	102	9.2	6.4	8.6	1.0	(g)	24.0	..					8.1	
1922	127	16.0	6.2	11.0	6.0	(g)	7.0	..					1.3	
1932	202	20.6	4.6	12.8	9.6	5.0	23.8	..					0.3	
1942	130	16.2	12.0	28.2	10.6	5.2	18.4	..					1.9	
1944	105	13.8	13.5	26.1	10.2	3.0	(g)	..					3.1	
1945	94	16.5	13.2	28.2	11.0	3.7	(g)	..					3.4	
1946	139	24.8	23.7	28.0	12.2	6.1	52.8	..					3.2	
1947	135	25.4	30.9	42.3	19.7	5.4	(g)	..					5.6	
1948	187	41.8	24.7	45.1	25.5	6.1	7.7	..					9.2	
1949	185	48.3	24.4	59.5	30.3	26.4	(g)	..					11.8	
1950	182	50.8	30.3	70.0	30.2	28.3	(g)	..					12.3	
1951	123	37.8	54.4	60.8	37.6	29.6	(g)	..					21.4	
1952	28	10.2	34.3	71.0	44.4	13.8	14.0	..					39.9	
1953	112	40.9	40.3	131.6	61.2	43.3	40.8	..					38.9	
1954	90	33.1	38.9	113.8	67.9	63.2	27.5	..					25.6	
1955	142	50.0	39.4	127.0	68.0	62.3	27.4	..					28.1	
1956	186	58.7	41.8	119.1	67.4	49.4	16.6	..					38.2	
1957	173	52.9	48.5	100.1	52.9	57.6	28.5	..					51.4	
1958	116	32.3	50.8	110.5	72.0	70.0	12.7	..					42.4	
1959	176	50.9	47.1	194.4	73.1	64.3	6.6	..					32.7	
1960	175	58.4	63.6	177.0	64.3	53.3	20.4	..					43.5	
1961	141	40.9	54.4	144.6	61.1	70.1	79.9	..					54.4	
1962	178	48.5	64.3	179.4	73.5	67.8	18.0	..					47.7	
1963	179	49.3	73.7	225.7	73.3	91.0	12.9	..					43.5	
1964	202	57.0	91.7	243.7	92.3	156.5	14.3	..					54.4	
1965	214	67.4	80.1	286.2	86.1	112.7	18.4	0.8					76.6	
1966	186	57.7	89.2	287.7	107.3	93.9	24.4	2.7					87.5	
1967	230	64.8	86.3	285.5	94.5	100.0	18.1	46.0					100.3	
1968	172	47.0	62.3	284.6	104.9	97.6	15.4	103.0					122.7	
1969	166	40.5	75.3	291.2	92.4	122.2	22.7	179.5					142.9	
1970	218	52.5	87.5	426.1	87.7	116.1	29.4	277.8					204.9	
1971	197	48.1	71.3	438.4	99.8	149.6	18.1	374.3					230.8	
1972	126	48.9	80.5	569.4	89.4	210.6	19.1	375.5					225.5	

(a) Australian produce. (b) Includes concentrates and ghee. (c) Includes sausage casings, natural. (d) Includes juices and fruit preparations. (e) Excludes iron ore and iron ore concentrates. (f) Year ended previous December. (g) Less than \$0.05m.



OVERSEAS TRADE—continued  
PRINCIPAL IMPORTS

Year ended 30 June—	<i>Vegetable foodstuffs, etc.</i>	<i>Apparel, etc.</i>	<i>Oil, etc.</i>	<i>Metals, etc.</i>	<i>Rubber</i>	<i>Paper, etc.</i>
	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.
1902(a)	7.2	21.8	2.4	15.6	1.0	3.2
1912(a)	7.4	32.4	3.2	28.0	2.8	5.2
1922	8.0	62.0	9.4	45.6	3.4	8.8
1932	5.2	30.8	11.0	14.8	1.6	8.8
1942	12.3	65.3	32.4	143.6	6.0	8.7
1943	14.5	59.0	35.0	203.1	4.4	4.7
1944	10.5	77.2	47.5	215.4	6.0	11.8
1945	13.0	90.7	41.3	150.4	3.5	14.8
1946	17.6	63.4	41.5	92.5	5.9	16.3
1947	18.9	97.8	41.3	105.2	10.9	26.8
1948	33.0	192.1	69.5	170.8	9.8	46.8
1949	27.9	218.4	86.4	256.1	12.6	42.1
1950	41.4	199.5	104.8	454.7	21.4	37.8
1951	49.6	277.3	139.7	479.7	59.3	58.0
1952	50.1	407.1	174.9	786.8	68.0	137.5
1953	37.0	96.5	148.5	452.0	17.4	44.9
1954	51.4	227.6	167.0	504.4	23.7	68.2
1955	71.9	253.5	193.8	638.3	34.1	92.8
1956	44.1	222.7	199.3	644.1	44.1	87.2
1957	51.6	182.7	191.1	530.1	33.4	83.5
1958	51.5	217.0	203.4	564.4	33.3	89.8
1959	55.3	193.9	209.0	583.6	33.6	96.1
1960	54.9	222.1	213.5	710.1	48.5	103.8
1961	60.5	264.9	223.3	871.3	47.3	133.8
1962	56.3	208.4	219.8	630.3	35.5	109.6
1963	55.5	233.3	246.3	850.0	46.7	133.5
1964	61.6	234.0	251.5	947.1	51.2	141.7
1965	66.2	272.1	260.1	1,275.2	66.3	156.5

Year ended 30 June—	<i>Food and live animals</i>	<i>Beverages and tobacco</i>	<i>Crude materials, inedible, except fuels</i>	<i>Mineral fuels, lubricants and related materials</i>	<i>Animal and vegetable oils and fats</i>	<i>Chemicals</i>	<i>Manu- factured goods classified chiefly by materials</i>	<i>Machinery and transport equipment</i>	<i>Miscel- laneous manu- factured articles</i>	<i>Com- modities and trans- actions of merchan- dise trade not elsewhere classified</i>
	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.
1966	110	37	197	252	15	266	590	1,121	220	90
1967	118	38	206	247	15	297	586	1,144	243	110
1968	117	36	224	241	14	309	644	1,250	270	111
1969	128	44	228	252	13	328	688	1,328	298	116
1970	140	48	247	255	16	363	753	1,528	350	124
1971	158	50	235	190	18	410	867	1,644	403	125
1972	160	51	219	194	15	410	856	1,483	432	137

(a) Year ended previous December.

## TRANSPORT AND COMMUNICATION

## SHIPPING

Year ended 30 June	Overseas vessels				Overseas cargo		Interstate vessels—		Interstate cargo shipped
	Entrances		Clearances				entrances		
	No.	Net	No.	Net	Dis- charged	Shipped	No.	Net	
		tonnage		tonnage				tonnage	
		mil. tons		mil. tons	mil. tons	mil. tons		mil. tons	
					(a)	(a)			(a)
1902 . . .	(b)	(b)	(b)	(b)	n.a.	n.a.	n.a.	n.a.	n.a.
1912 . . .	(c)2,081	(c)5.0	(c)2,093	(c)5.0	n.a.	n.a.	(c)5,000	(c)6.8	n.a.
1922 . . .	1,567	4.6	1,544	4.5	2.4	5.8	4,897	6.4	5.5
1932 . . .	1,519	5.7	1,538	5.7	3.0	6.7	3,958	5.5	4.4
1942 . . .	1,276	5.2	1,268	5.6	5.5	4.2	4,860	6.6	10.0
1944 . . .	1,094	4.5	1,286	5.2	5.9	5.1	3,731	5.2	9.2
1945 . . .	1,059	4.5	1,088	4.6	6.1	4.9	3,543	5.1	9.3
1946 . . .	1,146	5.3	1,225	5.4	6.2	3.9	3,108	4.4	7.4
1947 . . .	1,202	5.2	1,287	5.2	5.6	4.5	3,084	4.7	8.5
1948 . . .	1,470	6.1	1,479	5.8	6.9	5.8	2,943	4.2	8.4
1949 . . .	1,706	7.5	1,780	7.5	8.4	6.8	3,091	4.7	7.4
1950 . . .	1,942	8.7	1,965	8.7	11.3	6.4	3,228	5.3	7.6
1951 . . .	1,911	8.6	1,992	8.7	13.1	6.7	3,301	5.8	8.0
1952 . . .	2,038	9.0	2,098	9.3	14.4	5.7	3,750	7.9	9.0
1953 . . .	1,988	8.7	2,053	8.9	9.7	7.5	4,555	9.2	9.7
1954 . . .	2,054	8.9	2,073	8.9	11.3	7.1	4,759	9.6	10.6
1955 . . .	2,245	9.9	2,260	10.1	14.4	7.5	4,644	9.4	11.7
1956 . . .	2,425	11.2	2,457	11.1	15.9	8.2	4,626	9.5	12.9
1957 . . .	2,628	11.8	2,662	11.8	15.3	10.1	4,805	9.5	13.2
1958 . . .	2,656	12.4	2,598	12.1	16.6	8.9	5,127	9.8	13.8
1959 . . .	2,706	12.9	2,757	13.1	16.9	10.1	5,012	9.5	13.4
1960 . . .	2,976	14.5	2,969	14.4	18.7	11.6	5,004	9.5	14.3
1961 . . .	3,382	17.3	3,396	17.0	21.1	15.3	4,860	9.6	15.2
1962 . . .	3,599	18.9	3,611	18.8	20.3	18.7	5,032	9.8	14.8
1963 . . .	3,411	19.0	3,351	18.6	22.8	17.0	4,845	9.7	15.4
1964 . . .	3,714	20.7	3,763	20.9	24.7	21.6	5,067	10.1	16.8
1965 . . .	3,813	21.7	3,788	21.7	27.7	22.4	5,263	13.2	17.8
1966 . . .	3,929	23.0	4,029	23.3	28.3	23.8	5,480	15.1	17.7
1967 . . .	3,977	27.4	4,017	27.6	31.3	34.6	4,937	15.3	17.4
1968 . . .	3,972	30.1	4,013	30.3	32.3	43.4	5,159	15.7	19.0
1969 . . .	4,390	36.4	4,360	36.2	34.5	57.0	5,269	15.8	20.4
1970 . . .	4,971	44.5	5,053	44.6	33.4	79.0	4,834	17.7	22.5
1971 . . .	5,476	50.8	5,578	51.4	26.5	102.8	4,967	23.7	26.7

(a) Tons weight plus tons measurement. (b) Separate details not available. Total entrances and clearances for year ended December 1901, 4,028 vessels, 6.5 million tons. (c) Year ended previous December.

## GOVERNMENT RAILWAYS(a)

## REGULAR INTERNAL AIR SERVICES

Year ended 30 June—	Route- miles (b)	Train mileage	Pas- senger journeys	Freight- tons carried	Freight- net ton- miles	Passengers			Freight		Mail	
						Miles flown	Embark- ations	Pas- senger miles	Tons up- lifted	Ton- miles	Tons up- lifted	Ton- miles
	'000	mil.	mil.	mil.	mil.	mil.	'000	mil.	'000(c)	mil.(d)	'000(c)	mil.(d)
1902	12.8	38.2	115	15.5	n.a.	..	..	..	..	..	..	..
1912	16.8	55.2	228	25.5	n.a.	..	..	..	..	..	..	..
1922	23.4	56.1	335	31.5	n.a.	..	..	..	..	..	..	..
1932	27.0	63.8	303	26.1	n.a.	0.9	6	3	0.04	n.a.	0.02	n.a.
1942	27.2	88.5	473	38.9	n.a.	7.8	151	76	1.3	1.0	n.a.	0.5
1944	27.2	91.8	533	42.0	n.a.	9.7	216	100	1.5	0.9	3.6	2.7
1945	27.2	90.2	535	40.8	n.a.	12.6	320	141	2.6	1.3	4.2	2.8
1946	27.2	86.7	546	36.7	n.a.	17.7	509	225	5.6	2.6	2.4	1.7
1947	27.2	85.5	503	37.8	5,605	32.0	850	366	13.7	6.7	1.3	0.7
1948	27.1	87.7	511	40.0	5,934	32.4	1,208	503	28.9	13.4	1.4	0.8
1949	27.0	92.3	507	41.4	6,212	35.2	1,409	566	37.4	17.1	1.8	0.9
1950	27.0	93.4	505	40.6	6,203	36.5	1,500	590	49.4	22.3	2.9	1.4
1951	27.0	88.7	476	40.9	6,277	40.7	1,685	669	59.4	27.1	3.2	1.5
1952	26.8	93.4	501	44.3	6,755	41.8	1,829	722	57.5	26.7	2.7	1.3
1953	26.8	88.7	498	44.0	6,574	39.1	1,706	667	57.6	27.2	2.3	1.2
1954	26.6	93.5	511	46.8	6,953	41.0	1,772	702	69.5	32.7	2.3	1.2
1955	26.6	94.8	517	47.7	7,295	43.5	1,918	766	78.7	37.0	2.3	1.3
1956	26.5	96.2	515	46.8	7,274	43.7	2,020	828	84.4	38.9	2.5	1.4
1957	26.4	95.1	499	47.5	7,463	42.1	2,125	891	75.1	36.3	2.5	1.4
1958	26.3	90.3	494	45.3	6,808	40.5	2,123	899	70.0	33.0	2.6	1.4
1959	26.2	92.7	479	48.0	7,320	40.3	2,235	944	62.8	28.8	2.7	1.5
1960	26.1	93.0	463	51.2	8,006	43.2	2,660	1,133	65.4	29.2	4.8	2.6
1962	25.6	92.6	461	55.4	8,788	42.3	2,639	1,110	63.0	28.2	6.0	3.1
1963	25.5	92.9	465	55.6	8,823	41.2	2,666	1,119	57.2	26.1	6.3	3.2
1964	25.2	96.5	471	55.9	9,253	43.7	2,833	1,221	59.4	28.3	6.5	3.3
1965	25.0	96.6	464	61.7	10,501	49.0	3,257	1,408	63.2	30.5	7.1	3.7
1966	25.0	94.3	460	64.8	11,145	52.3	3,764	1,639	70.0	33.9	7.7	4.1
1967	25.1	93.7	455	64.4	11,038	55.0	4,158	1,831	76.1	37.6	8.6	4.6
1968	25.1	94.5	453	68.5	11,517	56.8	4,425	1,972	82.1	40.1	9.6	5.1
1969	25.1	93.8	447	71.1	12,264	56.7	4,668	2,125	85.1	42.3	9.4	5.2
1970	25.1	97.1	450	75.7	13,126	60.3	5,185	2,402	89.9	45.5	9.9	5.5
1971	25.0	97.1	453	82.4	14,661	66.2	5,911	2,803	100.1	51.0	10.6	6.0
				85.9	15,415	71.2	6,340	3,091	100.8	53.5	10.9	6.4

(a) Particulars of train-mileages, passenger-journeys, freight tons carried, and freight net ton-miles refer only to operations for which revenue is received. (b) At end of period. (c) Short tons (2,000 lb). (d) In terms of short tons.

TRANSPORT AND COMMUNICATION—*continued*  
ROAD TRANSPORT COMMUNICATION

Year ended 30 June—	Tramway trolley- bus and omnibus services(a)	Motor vehicles on the register(b)				Postal matter dealt with(c)	Telephones		Tele- grams (e)	Broadcasting and television licences in force(b)	
		Motor cars and station wagons	Utilities, panel vans, etc., trucks and omnibuses	Motor cycles	Total motor vehicles (including motor cycles)		Instru- ments in service (b)	Services in operation (b)(d)		Broad- cast listeners'	Tele- vision viewers'
1902 . .	mil.	'000	'000	'000	'000	mil.	'000	'000	mil.	'000	'000
1912 . .	n.a.	..	..	..	..	articles	(f)36	(f)28	(f)8.2	..	..
	360	n.a.	n.a.	n.a.	n.a.	(f)384	(f)118	(f)96	(f)13.9	..	..
1922 . .	569		102		102	778	259	196	16.8	(g)1	..
1932 . .	589	420	96	72	588	887	485	364	13.9	369	..
1942 . .	(h)1,067	451	250	49	751	1,124	739	531	26.1	1,320	..
1943 . .	1,189	472	255	48	776	1,082	767	540	32.5	1,370	..
1944 . .	1,281	494	274	53	820	1,114	800	557	35.8	1,395	..
1945 . .	1,290	506	291	57	854	1,155	828	578	37.6	1,415	..
1946 . .	1,275	523	333	73	929	1,166	856	608	38.0	1,437	..
1947 . .	1,216	548	378	87	1,013	1,235	905	648	35.7	1,678	..
1948 . .	1,199	589	419	100	1,108	1,307	963	688	36.8	1,704	..
1949 . .	1,185	651	457	118	1,225	1,375	1,028	734	37.9	1,763	..
1950 . .	1,076	764	506	134	1,404	1,466	1,110	795	38.0	1,841	..
1951 . .	1,092	879	555	146	1,580	1,526	1,209	870	37.2	1,885	..
1952 . .	1,019	1,028	588	155	1,770	1,482	1,301	939	29.8	1,961	..
1953 . .	988	1,105	587	148	1,840	1,506	1,383	1,001	25.9	1,986	..
1954 . .	981	1,196	611	141	1,947	1,604	1,476	1,070	25.1	2,042	..
1955 . .	966	1,342	654	133	2,130	1,653	1,587	1,153	25.5	2,035	..
1956 . .	927	1,430	693	123	2,246	1,741	1,704	1,240	25.4	2,089	..
1957 . .	833	1,537	710	118	2,366	1,784	1,814	1,318	24.0	2,107	74
1958 . .	803	1,661	731	114	2,506	1,895	1,937	1,407	22.9	2,138	291
1959 . .	778	1,784	755	110	2,649	1,951	2,056	1,491	22.5	2,264	578
1960 . .	758	1,938	784	102	2,824	1,953	2,164	1,562	22.2	2,283	955
1961 . .	726	2,070	800	93	2,963	2,048	2,266	1,631	21.8	2,256	1,217
1962 . .	718	2,201	815	85	3,101	2,101	2,382	1,719	21.6	2,220	1,424
1963 . .	712	2,381	833	78	3,292	2,202	2,523	1,812	21.8	2,240	1,655
1964 . .	702	2,595	851	71	3,516	2,342	2,670	1,919	23.4	2,302	1,882
1965 . .	685	2,811	865	68	3,744	2,443	2,811	2,010	24.3	2,358	2,045
1966 . .	653	2,975	878	67	3,920	2,556	2,978	2,120	25.0	2,526	2,226
1967 . .	621	3,140	893	73	4,107	2,683	3,178	2,235	25.6	2,538	2,405
1968 . .	609	3,349	907	88	4,345	2,648	3,392	2,359	(i)23.4	2,580	2,519
1969 . .	590	3,551	930	105	4,586	2,648	3,599	2,511	(i)23.3	2,630	2,649
1970 . .	575	3,780	959	122	4,861	2,745	3,913	2,704	(i)23.2	2,670	2,758
1971 . .	561	4,003	985	153	5,140	2,780	4,157	2,857	(i)21.2	2,699	2,845

(a) Government and municipal. Trolley-bus services ceased in August 1969. (b) At end of period. (c) Letters, postcards, letter-cards, newspapers, packets, parcels, and registered articles. (d) All single lines plus one half the number of duplex lines. Until the introduction of duplex services in December 1948, statistics of exchange lines and telephone services were identical. (e) Telegrams despatched to places within Australia and despatched to or received from overseas. (f) Year ended previous December. (g) Year 1923-24. First year licences issued. (h) Tramway passenger journeys only before 1942. (i) Excludes telegrams received from overseas. These particulars are no longer available.

## NATIONAL ACCOUNTS

## GROSS NATIONAL PRODUCT

## GROSS FIXED CAPITAL EXPENDITURE

Year	At current prices			At constant prices(a)			At current prices		At constant prices		
			(d)			1966-67 prices(d)					1966-67 prices(d)
	(b)	(c)		1953-54 prices(d)	1959-60 prices(d)		(e)	(d)	1953-54 prices(d)	1959-60 prices(d)	
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1900-01	419	..	..	..	..	..	56	..	..	..	..
1901-02	444	..	..	..	..	..	74	..	..	..	..
1903-04	449	..	..	..	..	..	51	..	..	..	..
1904-05	445	..	..	..	..	..	50	..	..	..	..
1905-06	478	..	..	..	..	..	53	..	..	..	..
1906-07	538	..	..	..	..	..	72	..	..	..	..
1907-08	536	..	..	..	..	..	75	..	..	..	..
1908-09	583	..	..	..	..	..	76	..	..	..	..
1909-10	624	..	..	..	..	..	80	..	..	..	..
1910-11	683	..	..	..	..	..	98	..	..	..	..
1911-12	733	..	..	..	..	..	125	..	..	..	..
1912-13	802	..	..	..	..	..	146	..	..	..	..
1913-14	865	..	..	..	..	..	154	..	..	..	..
1914-15	833	..	..	..	..	..	132	..	..	..	..
1915-16	909	..	..	..	..	..	125	..	..	..	..
1916-17	943	..	..	..	..	..	123	..	..	..	..
1917-18	963	..	..	..	..	..	112	..	..	..	..
1918-19	1,089	..	..	..	..	..	146	..	..	..	..
1919-20	1,257	..	..	..	..	..	209	..	..	..	..
1920-21	1,426	..	..	..	..	..	245	..	..	..	..
1921-22	1,378	..	..	..	..	..	261	..	..	..	..
1922-23	1,510	..	..	..	..	..	273	..	..	..	..
1923-24	1,569	..	..	..	..	..	290	..	..	..	..
1924-25	1,722	..	..	..	..	..	303	..	..	..	..
1925-26	1,659	..	..	..	..	..	308	..	..	..	..
1926-27	1,729	..	..	..	..	..	328	..	..	..	..
1927-28	1,739	..	..	..	..	..	329	..	..	..	..
1928-29	1,711	..	..	..	..	..	309	..	..	..	..
1929-30	1,566	..	..	..	..	..	240	..	..	..	..
1930-31	1,288	..	..	..	..	..	166	..	..	..	..
1931-32	1,209	..	..	..	..	..	119	..	..	..	..
1932-33	1,264	..	..	..	..	..	134	..	..	..	..
1933-34	1,356	..	..	..	..	..	156	..	..	..	..
1934-35	1,422	..	..	..	..	..	203	..	..	..	..
1935-36	1,574	..	..	..	..	..	226	..	..	..	..
1936-37	1,717	..	..	..	..	..	253	..	..	..	..
1937-38	1,857	..	..	..	..	..	306	..	..	..	..
1938-39	1,847	1,860	(1,800)	..	..	..	298	(316)	..	..	..
1939-40	..	2,040	..	..	..	..	..	..	..	..	..
1940-41	..	2,174	..	..	..	..	..	..	..	..	..
1941-42	..	2,548	..	..	..	..	..	..	..	..	..
1942-43	..	2,936	..	..	..	..	..	..	..	..	..
1943-44	..	2,986	..	..	..	..	..	..	..	..	..
1944-45	..	2,906	..	..	..	..	..	..	..	..	..
1945-46	..	3,006	..	..	..	..	..	..	..	..	..
1946-47	..	3,234	..	..	..	..	..	..	..	..	..
1947-48	..	3,988	..	..	..	..	..	..	..	..	..
1948-49	..	4,524	4,351	7,328	..	..	..	792	1,350	..	..
1949-50	..	..	5,127	7,893	..	..	..	1,064	1,652	..	..
1950-51	..	..	6,806	8,353	..	..	..	1,524	2,049	..	..
1951-52	..	..	7,310	8,587	..	..	..	1,938	2,194	..	..
1952-53	..	..	8,293	8,515	..	..	..	1,937	1,983	..	..
1953-54	..	..	9,060	9,060	10,520	..	..	2,128	2,128	2,511	..
1954-55	..	..	9,653	9,542	11,142	..	..	2,353	2,294	2,698	..
1955-56	..	..	10,471	10,085	11,715	..	..	2,567	2,380	2,811	..
1956-57	..	..	11,407	10,352	11,946	..	..	2,667	2,380	2,819	..
1957-58	..	..	11,665	10,504	12,206	..	..	2,856	2,499	2,951	..
1958-59	..	..	12,542	11,452	13,117	..	..	3,022	2,614	3,085	..
1959-60	..	..	13,823	12,078	13,823	16,501	..	3,399	2,881	3,399	3,942
1960-61	..	..	14,701	..	14,261	17,054	..	3,665	..	3,563	4,155
1961-62	..	..	15,041	..	14,399	17,259	..	3,717	..	3,567	4,170
1962-63	..	..	16,226	..	15,320	18,396	..	4,020	..	3,842	4,478
1963-64	..	..	17,979	..	16,435	19,645	..	4,509	..	4,236	4,935
1964-65	..	..	19,753	..	17,651	21,021	..	5,252	..	4,790	5,566
1965-66	..	..	20,688	..	17,840	21,374	..	5,698	..	5,055	5,885
1966-67	..	..	22,757	..	19,042	22,757	..	5,969	..	5,128	5,969
1967-68	..	..	24,281	..	..	23,628	..	6,526	..	..	6,343
1968-69	..	..	27,216	..	..	25,621	..	7,221	..	..	6,774
1969-70	..	..	30,091	..	..	27,115	..	7,948	..	..	7,142
1970-71	..	..	33,089	..	..	28,265	..	8,724	..	..	7,385
1971-72p	..	..	36,485	..	..	29,155	..	9,297	..	..	7,381

(a) For a description of constant price estimates, see *Australian National Accounts*, op. cit. pp 17 and 100. (b) N. G. Butlin, *Australian Domestic Product, Investment and Foreign Borrowing 1861-1938-39*, Cambridge University Press, Cambridge, 1962. Gross domestic product excluding livestock accumulation approximates conceptually gross national product as defined in the Australian National Accounts. (c) Published by the Commonwealth Statistician. Figures prior to 1948-49 are from *National Income and Expenditure 1955-56* and are not strictly comparable with subsequent figures because of a number of definitional changes and statistical revisions; see pages 18-19, 117-20, *Australian National Accounts 1948-49 to 1961-62*, Commonwealth Bureau of Census and Statistics. (d) *Australian National Accounts 1970-71*, Commonwealth Bureau of Census and Statistics, and, for the last five years, the Budget Paper *National Income and Expenditure 1971-72*. The figures of \$1,800m for gross national product and \$316m for gross fixed capital expenditure in 1938-39 are based on a reconstruction of earlier estimates, and are approximately consistent with the present Australian National Account series. Mr B. D. Haig ('1938-39 National Income Estimates', *Australian Economic History Review*, Vol. vii, No. 2, September 1967) has adjusted components of gross national expenditure and imports and exports for changes in prices. If the price indexes implied by Mr Haig's estimates are used to revalue at 1938-39 prices gross national product and gross fixed capital expenditure for 1948-49, values of \$2,384m and \$434m, respectively, are obtained. (e) N. G. Butlin, op. cit. For a variety of reasons, Professor Butlin's gross domestic capital formation figures given here differ conceptually from those for gross fixed capital expenditure in the Australian National Accounts.



## PRIVATE FINANCE

NOTE ISSUE	BANKING				
	Australian note issue (a)	Trading banks		Bank clearings (c)	Savings banks Depositors balances(d)
		Advances (b)	Deposits (b)		
Year ended 30 June—					
	\$m	\$m	\$m	\$m	\$m
1902 . . . . .	16	188	186	13	62
1912 . . . . .	107	238	300	25	118
1922 . . . . .	103	364	578	65	308
1932 . . . . .	205	522	638	55	396
1942 . . . . .	382	648	965	142	549
1944 . . . . .	373	542	1,389	158	943
1945 . . . . .		503	1,525	149	1,134
				<i>Debits to customers' accounts(c)</i>	
1946 . . . . .	400	519	1,397	(e)296	1,327
1947 . . . . .	405	672	1,445	349	1,320
1948 . . . . .	393	824	1,598	451	1,363
1949 . . . . .	426	966	1,830	514	1,428
1950 . . . . .	463	1,148	2,264	655	1,524
1951 . . . . .	551	1,357	2,826	897	1,675
1952 . . . . .	605	1,656	2,564	866	1,784
1953 . . . . .	657	1,450	2,856	877	1,895
1954 . . . . .	688	1,690	3,061	1,100	2,020
1955 . . . . .	726	1,982	3,089	1,127	2,145
1956 . . . . .	745	1,945	2,992	1,123	2,282
1957 . . . . .	763	1,897	3,231	1,250	2,455
1958 . . . . .	775	2,060	3,240	1,282	2,594
1959 . . . . .	790	2,007	3,362	1,432	2,783
1960 . . . . .	843	2,211	3,611	1,737	3,045
1961 . . . . .	839	2,238	3,600	1,654	3,155
1962 . . . . .	856	2,287	3,837	1,848	3,470
1963 . . . . .	869	2,465	4,064	2,028	3,940
1964 . . . . .	870	2,610	4,649	2,318	4,476
1965 . . . . .	862	2,955	5,038	2,653	4,887
1966 . . . . .	849	3,183	5,308	2,672	5,254
1967 . . . . .	938	3,548	5,614	2,978	5,765
1968 . . . . .	1,006	4,020	6,087	3,588	6,222
1969 . . . . .	1,107	4,384	6,706	4,055	6,707
1970 . . . . .	1,216	4,903	7,099	4,891	7,105
1971 . . . . .	1,369	5,317	7,431	5,711	7,635
1972 . . . . .	1,499	5,876	8,322	6,200	8,391

(a) Last Wednesday in June. (b) June quarter up to and including 1945; weekly average for month of June from 1946 onwards. (c) Weekly average, June month. (d) End of June. (e) Bank clearings, \$179m.

## LIFE INSURANCE(a)

Year ended 31 December(b)—	Ordinary(c)		Industrial		Total	
	Policies	Sum assured	Policies	Sum assured	Policies	Sum assured
	'000	\$m	'000	\$m	'000	\$m
1901 . . . . .	414	216	236	10	650	226
1911 . . . . .	484	218	467	20	951	238
1921 . . . . .	730	362	973	60	1,703	422
1931 . . . . .	871	570	1,550	134	2,421	704
1941 . . . . .	1,340	926	2,780	254	4,120	1,180
1943 . . . . .	1,433	998	3,026	285	4,459	1,284
1944 . . . . .	1,506	1,071	3,158	306	4,664	1,376
1945 . . . . .	1,587	1,157	3,279	327	4,866	1,484
1946 . . . . .	1,730	1,310	3,429	357	5,159	1,667
1947 . . . . .	1,902	1,481	3,541	386	5,442	1,867
1948 . . . . .	2,071	1,669	3,643	418	5,714	2,087
1949 . . . . .	2,224	1,862	3,725	448	5,949	2,310
1950 . . . . .	2,377	2,094	3,793	477	6,170	2,571
1951 . . . . .	2,554	2,424	3,843	507	6,396	2,931
1952 . . . . .	2,731	2,757	3,873	541	6,604	3,298
1953 . . . . .	2,893	3,105	3,881	571	6,774	3,677
1954 . . . . .	3,033	3,482	3,827	594	6,860	4,076
1955 . . . . .	3,184	3,942	3,766	615	6,949	4,556
1956 . . . . .	3,319	4,447	3,702	631	7,021	5,077
1957 . . . . .	3,446	5,067	3,615	645	7,061	5,712
1958 . . . . .	3,577	5,747	3,531	657	7,108	6,404
1959 . . . . .	3,710	6,571	3,443	665	7,154	7,236
1960 . . . . .	4,110	7,690	3,340	686	7,450	8,376
1961 . . . . .	4,201	8,743	3,199	707	7,400	9,450
1962 . . . . .	4,291	9,854	3,076	743	7,366	10,597
1963 . . . . .	4,401	11,010	2,953	777	7,354	11,787
1964 . . . . .	4,539	12,481	2,851	823	7,390	13,304
1965 . . . . .	4,705	14,057	2,755	871	7,460	14,928
1966 . . . . .	4,873	15,750	2,644	918	7,517	16,668
1967 . . . . .	5,051	17,762	2,603	981	7,654	18,743
1968 . . . . .	5,251	20,357	2,561	1,041	7,812	21,397
1969(d) . . . . .	5,428	23,245	2,530	1,114	7,958	24,360
1970(e) . . . . .	5,622	27,621	2,496	1,216	8,117	28,836
1971(e) . . . . .	5,901	32,597	2,467	1,332	8,368	33,929

(a) Existing business in Australia. (b) Companies' financial years which ended during the year. (c) Includes superannuation business. (d) From 1 July includes business of the Government Insurance Office of New South Wales and the Queensland State Government Insurance Office, but excludes Papua New Guinea business. (e) Figures relate to end of December and are derived from monthly figures.

## PUBLIC FINANCE

Year ended 30 June—	COMMONWEALTH				STATE				GOVERNMENT SECURITIES ON ISSUE(a)				
	Consolidated revenue fund		Net loan fund expenditure (b)	Taxation collections	Consolidated revenue fund		Net loan expenditure (b)	Taxation collections	Commonwealth	State	Total	Overseas	In Australia
	Revenue	Expenditure			Revenue	Expenditure							
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1902 . . . . .	23	8	..	18	56	58	19	5	..	429	429	n.a.	n.a.
1912 . . . . .	41	29	2	32	83	82	33	11	12	557	569	388	181
1922 . . . . .	128	128	10	99	170	175	67	36	708	1,039	1,747	823	924
1932 . . . . .	143	143	8	109	199	242	12	65	692	1,800	2,492	1,320	1,172
1942 . . . . .	420	420	426	362	305	299	17	115	1,340	2,038	3,378	1,312	2,066
1944 . . . . .	684	684	755	610	338	334	6	43	2,850	1,994	4,844	1,262	3,582
1945 . . . . .	754	754	532	679	338	334	12	44	3,355	2,008	5,364	1,231	4,133
1946 . . . . .	782	782	319	709	332	331	14	50	3,670	2,005	5,675	1,142	4,533
1947 . . . . .	863	863	98	774	346	350	48	57	3,733	2,044	5,777	1,130	4,647
1948 . . . . .	932	932	26	848	394	398	75	64	3,702	2,119	5,821	1,117	4,704
1949 . . . . .	1,109	1,109	-9	952	452	456	102	73	3,685	2,202	5,887	1,088	4,798
1950 . . . . .	1,161	1,161	85	1,018	521	525	147	83	3,731	2,367	6,098	1,099	4,999
1951 . . . . .	1,684	1,684	101	1,447	613	613	257	103	3,777	2,619	6,396	1,067	5,329
1952 . . . . .	2,034	2,034	63	1,848	777	783	395	126	3,838	2,993	6,830	1,113	5,717
1953 . . . . .	2,080	2,080	71	1,783	876	877	322	142	3,893	3,288	7,181	1,142	6,038
1954 . . . . .	2,046	2,046	83	1,810	941	935	335	161	3,964	3,573	7,537	1,165	6,372
1955 . . . . .	2,135	2,135	66	1,882	991	998	321	179	3,998	3,846	7,844	1,216	6,628
1956 . . . . .	2,277	2,277	88	2,014	1,052	1,082	312	196	4,031	4,121	8,151	1,269	6,882
1957 . . . . .	2,624	2,624	88	2,208	1,154	1,168	317	229	3,957	4,396	8,353	1,216	7,137
1958 . . . . .	2,648	2,648	90	2,338	1,210	1,224	314	256	3,670	4,686	8,356	1,248	7,108
1959 . . . . .	2,592	2,592	132	2,283	1,280	1,295	338	276	3,512	4,988	8,499	1,319	7,180
1960 . . . . .	2,877	2,877	119	2,519	1,399	1,404	357	320	3,334	5,301	8,635	1,389	7,246
1961 . . . . .	3,277	3,277	83	2,871	1,511	1,513	384	335	3,215	5,630	8,845	1,413	7,433
1962 . . . . .	3,283	3,283	182	2,858	1,609	1,617	395	353	3,119	5,963	9,082	1,424	7,658
1963 . . . . .	3,371	3,371	274	2,907	1,694	1,696	405	391	3,121	6,314	9,434	1,522	7,912
1964 . . . . .	3,809	3,809	226	3,247	1,829	1,829	438	448	3,172	6,691	9,863	1,545	8,318
1965 . . . . .	4,418	4,418	167	3,819	1,947	1,965	477	493	3,134	7,091	10,225	1,529	8,695
1966 . . . . .	4,879	4,879	(c)260	4,221	2,094	2,119	492	536	3,145	7,495	10,639	1,505	9,134
1967 . . . . .	5,228	5,228	(c)450	4,492	2,286	2,289	516	601	3,275	7,934	11,209	1,532	9,677
1968 . . . . .	5,760	5,760	(c)655	4,953	2,463	2,468	540	684	3,600	8,317	11,917	1,558	10,358
1969 . . . . .	6,086	6,086	(c)236	5,529	2,689	2,700	574	783	3,682	8,831	12,512	1,698	10,815
1970 . . . . .	6,979	6,979	(c)446	6,382	3,010	3,028	615	873	3,885	9,320	13,205	1,580	11,625
1971 . . . . .	7,838	7,838	(c)523	7,185	3,457	3,483	628	912	3,801	9,691	13,492	1,546	11,946
1972 . . . . .	8,688	8,688	(c)444	7,944	4,035	4,050	896	1,305	3,808	10,227	14,035	1,442	12,592

(a) At 30 June. Expressed in Australian currency equivalents at ruling rates of exchange.

(b) Loan expenditure on works and services

(c) Includes expenditure financed under the United States Defence Credits Arrangements.

## SOCIAL

## PENSIONS, BENEFITS, ETC.

Year ended 30 June—	Age and invalid pensions		Child endowment		Widows' pensions		Unemployment benefits	
	Pensioners (a)	Amount paid	Children endowed (a)	Endowment paid	Pensioners (a)	Amount paid	No. on benefit—weekly average	Amount paid
	'000	\$m	'000	\$m	'000	\$m	'000	\$m
1902 . . . . .	..	..	..	..	..	..	..	..
1912 . . . . .	90	4.3	..	..	..	..	..	..
1922 . . . . .	147	10.8	..	..	..	..	..	..
1932 . . . . .	261	22.3	..	..	..	..	..	..
1942 . . . . .	341	38.5	910	22.6	..	..	..	..
1944 . . . . .	320	43.4	922	(b)24.5	42	5.6	..	..
1945 . . . . .	316	43.4	939	24.1	44	5.9	..	..
1946 . . . . .	333	53.9	965	36.0	45	6.5	6	1.0
1947 . . . . .	364	58.8	1,007	(b)39.7	43	6.7	9	1.8
1948 . . . . .	381	73.1	1,050	38.9	43	7.8	4	0.7
1949 . . . . .	403	83.4	1,105	48.6	43	8.8	2	..
1950 . . . . .	414	89.1	1,836	(b)60.7	43	8.8	13	2.5
1951 . . . . .	417	99.0	2,389	87.2	42	9.7	1	(c)
1952 . . . . .	426	119.6	2,518	93.2	41	11.2	2	(c)
1953 . . . . .	451	144.8	2,624	(b)106.5	41	12.7	30	9.1
1954 . . . . .	478	162.6	2,717	101.5	41	13.2	14	5.0
1955 . . . . .	510	176.0	2,789	105.1	42	13.7	4	1.4
1956 . . . . .	535	203.3	2,876	(b)120.8	43	15.4	4	1.4
1957 . . . . .	554	218.4	2,978	114.1	45	17.7	12	4.2
1958 . . . . .	574	243.2	3,074	117.5	47	19.7	24	9.8
1959 . . . . .	598	259.1	3,172	(b)135.1	50	21.6	28	11.9
1960 . . . . .	619	294.0	3,252	125.1	52	24.3	21	9.0
1961 . . . . .	651	315.9	3,340	(b)148.6	55	26.9	22	8.9
1962 . . . . .	691	360.5	3,420	132.8	57	30.2	53	25.3
1963 . . . . .	711	375.5	3,458	135.4	58	31.4	40	21.3
1964 . . . . .	725	399.9	3,631	(b)168.8	62	41.6	26	13.5
1965 . . . . .	736	426.6	3,711	172.8	65	47.0	14	6.8
1966 . . . . .	744	442.4	3,763	176.4	69	50.0	15	7.8
1967 . . . . .	764	481.8	3,835	(b)199.3	73	56.4	21	11.2
1968 . . . . .	797	514.0	3,891	187.9	75	61.1	21	11.2
1969 . . . . .	827	558.6	3,996	193.3	78	69.1	18	9.3
1970 . . . . .	913	642.0	4,079	(b)220.1	87	81.8	13	8.9
1971 . . . . .	942	702.3	4,156	198.5	90	90.5	15	10.8
1972 . . . . .	972	818.5	4,235	216.6	93	104.6	29	26.0

(a) At 30 June, than \$0.05m.

(b) Five 12-weekly payments made during the year instead of the normal four.

(c) Less

## SOCIAL—continued

## PENSIONS, BENEFITS ETC.—continued

Year ended 30 June—	Hospital and nursing home benefits— amount paid	Medical benefits— amount paid	Phar- maceutical benefits— amount paid	Total Common- wealth expenditure on Pensions, benefits, etc.(a)	War pensions		Service pensions	
					No.(b)	Amount paid	No.(b)	Amount paid
	\$m	\$m	\$m	\$m	'000	\$m	'000	\$m
1902 . . .	..	..	..	..	..	..	..	..
1912 . . .	..	..	..	4.3	..	..	..	..
1922 . . .	..	..	..	12.1	225	14.1	..	..
1932 . . .	..	..	..	23.0	274	14.9	..	..
1942 . . .	..	..	..	61.8	220	15.0	14	1.2
1944 . . .	..	..	..	78.3	245	20.8	13	1.3
1945 . . .	..	..	..	78.8	281	22.9	13	1.3
1946 . . .	2.2	..	..	106.4	360	26.6	13	1.6
1947 . . .	8.8	..	..	124.0	395	30.2	14	1.8
1948 . . .	8.9	..	..	137.2	416	32.7	16	2.5
1949 . . .	11.8	..	..	161.6	440	37.9	16	2.7
1950 . . .	12.6	..	0.1	185.6	471	42.1	16	2.9
1951 . . .	13.1	..	5.9	230.0	503	53.1	17	3.0
1952 . . .	13.4	2.1	15.4	275.2	525	66.7	17	3.6
1953 . . .	14.4	3.5	14.4	331.0	544	72.6	19	4.5
1954 . . .	16.7	7.2	18.5	353.1	564	78.1	21	5.4
1955 . . .	18.6	13.5	21.5	378.6	584	87.8	22	6.0
1956 . . .	19.1	14.6	23.8	429.7	600	91.3	35	8.3
1957 . . .	19.6	18.3	23.4	447.8	614	95.6	39	9.8
1958 . . .	21.6	20.6	30.1	495.0	629	106.6	42	11.3
1959 . . .	29.6	23.2	41.9	556.5	643	109.0	44	12.4
1960 . . .	37.2	26.8	48.7	598.7	655	117.5	46	13.5
1961 . . .	41.3	28.4	55.8	661.2	662	132.6	50	15.6
1962 . . .	44.4	30.6	70.4	730.4	671	135.1	58	19.4
1963 . . .	47.3	32.6	76.9	758.6	671	140.7	62	21.7
1964 . . .	56.2	34.4	78.8	832.7	669	154.5	65	24.2
1965 . . .	58.8	44.6	82.2	890.4	660	153.5	65	25.5
1966 . . .	60.7	54.6	91.8	941.6	647	170.5	66	28.2
1967 . . .	67.4	58.2	101.3	1,031.1	632	161.7	67	29.1
1968 . . .	74.8	62.5	105.1	1,075.0	617	164.4	69	31.8
1969 . . .	85.9	66.5	118.4	1,162.3	601	182.8	67	34.1
1970 . . .	111.4	76.1	136.7	1,341.8	585	183.5	74	39.9
1971 . . .	122.8	115.5	160.3	1,477.2	570	191.4	77	43.7
1972 . . .	162.0	160.4	173.3	1,752.3	553	211.1	78	49.2

(a) National Welfare Fund items only, including expenditure for all years on pensions, benefits, etc., which subsequently became payable from the National Welfare Fund. In addition to the items shown in the preceding columns, the tables include expenditure on—the rehabilitation service; milk for school children; tuberculosis campaign; sickness, special and funeral benefits and some miscellaneous welfare and health services. Excludes war and service pensions telephone rental concessions for pensioners and some minor welfare and health services. (b) At 30 June.

## EDUCATION

## POLICE AND PRISONS

Year(a)	Schools				Universities		Police		Prisons	Convicted prisoners
	Government		Non-government		Number	Students	Police	Prisons	No.	'000
	Schools	Pupils	Schools	Pupils						
	'000	'000	'000	'000		'000	'000			
1902 . . .	7.2	637	2.4	144	4	1.9	5.9	n.a.		4.2
1912 . . .	8.4	663	1.9	164	6	3.8	6.6	101		3.4
1922 . . .	9.6	837	1.7	202	6	7.8	7.0	92		3.0
1932 . . .	10.2	934	1.8	221	6	9.9	8.6	85		4.1
1942 . . .	9.0	868	1.8	250	6	10.6	9.7	71		3.5
1944 . . .	8.7	878	1.8	275	6	14.7	9.4	70		3.9
1945 . . .	8.4	875	1.8	273	6	17.8	9.4	70		3.9
1946 . . .	8.3	887	1.8	277	7	25.0	9.9	70		3.6
1947 . . .	8.2	906	1.9	281	7	30.0	10.2	73		3.8
1948 . . .	8.0	928	1.8	281	7	31.9	10.6	72		3.5
1949 . . .	7.9	971	1.8	293	8	31.1	11.1	71		3.8
1950 . . .	7.8	1,027	1.9	310	8	30.0	11.5	70		4.0
1951 . . .	7.6	1,078	1.9	326	8	31.1	11.9	70		4.2
1952 . . .	7.6	1,145	1.9	348	8	29.1	12.6	69		4.8
1953 . . .	7.6	1,206	2.0	366	8	28.3	12.7	70		4.8
1954 . . .	7.6	1,275	2.0	388	9	28.9	12.6	71		4.8
1955 . . .	7.6	1,337	2.1	410	9	30.3	12.9	72		5.1
1956 . . .	7.7	1,357	2.1	432	9	34.0	13.5	73		6.0
1957 . . .	7.7	1,427	2.0	453	9	36.6	14.1	73		6.4
1958 . . .	7.8	1,498	2.0	474	10	41.5	14.5	73		6.6
1959 . . .	7.8	1,560	2.1	492	10	47.2	14.9	74		6.6
1960 . . .	7.9	1,613	2.1	511	10	53.4	15.3	77		6.8
1961 . . .	7.9	1,662	2.1	527	10	57.7	15.9	75		7.2
1962 . . .	7.9	1,711	2.2	540	10	63.3	16.4	74		7.4
1963 . . .	7.9	1,754	2.2	553	10	69.1	16.7	73		7.7
1964 . . .	7.8	1,799	2.2	565	13	76.2	17.2	74		7.7
1965 . . .	7.8	1,855	2.2	580	13	83.3	17.6	74		7.7
1966 . . .	7.8	1,919	2.2	583	14	91.3	18.4	76		8.1
1967 . . .	7.7	1,991	2.2	595	14	95.4	19.0	75		8.7
1968 . . .	7.6	2,055	2.2	601	14	101.5	19.7	79		8.8
1969 . . .	7.5	2,114	2.2	603	14	109.7	20.1	77		9.2
1970 . . .	7.5	2,160	2.2	608	17	116.8	20.3	77		9.3
1971 . . .	7.4	2,196	2.2	611	17	123.8	21.0	78		9.5

(a) Years ended at varying dates for education statistics. Years ended 30 June for Police and Prisons.





## CHRONOLOGICAL TABLE

### CHIEF EVENTS IN AUSTRALIA SINCE 1955

NOTES. In issues of the Year Book up to No. 48 (*see* No. 48, page 1201) this table covered events back to the establishment of settlement in Australia in 1788. Later issues up to No. 50 (*see* No. 50, page 1289) covered events back to 1945. This issue covers the years 1955 to 1971 and the first half of 1972.

For each earlier year this Table rarely contains more than two or three items; for recent years, however, in order to provide a wide cover of events, etc., it includes a much greater number. Both the nature of the Table and considerations of space render necessary a continual reduction in these items, and for more information the reader should therefore consult earlier issues.

- 1955 First power generated by Snowy Mountains Hydro-electric Authority. Australian population reached 9,000,000. Cocos (Keeling) Islands became Territory under authority of Commonwealth.
- 1956 Amendment to Conciliation and Arbitration Act altered the structure of the arbitration machinery by separating judicial functions from conciliation and arbitration functions.
- 1957 High Court ruled that interstate vehicles could not be compelled to register in New South Wales, but upheld validity of Victorian tax on commercial vehicles, including those engaged in interstate trade, imposed solely for the maintenance of roads. National Capital Development Commission set up to co-ordinate development of Canberra.
- 1958 Prime Minister officially opened Australia's first nuclear reactor at Lucas Heights, near Sydney. Christmas Island (Indian Ocean) transferred to Australian Administration.
- 1959 Annual Holidays Act, 1944-1958 provided for three weeks' annual holiday for all New South Wales workers. Population reached 10,000,000.
- 1960 Provision made for Social Service benefits to be paid to Australian Aborigines. *Commonwealth Banks Act* 1959 and *Reserve Bank Act* 1959 proclaimed (*see* page 488). National Service training suspended. Commonwealth Government announced special economic measures designed to counter inflationary trend and safeguard overseas funds.
- 1961 Commonwealth *Matrimonial Causes Act* 1959 unifying State Acts became operative (*see* page 450). Oil discovered in south-west Queensland. Australian population census taken. Iron ore deposits estimated at 1,800 million tons discovered at Pilbara (Western Australia).
- 1962 Commonwealth and Western Australian Electoral Acts amended to provide for votes for Aborigines. Aborigines exercised voting rights in Northern Territory for first time.
- 1963 Approval given to agreement for United States to operate a naval communications station at North West Cape, Western Australia. Australian population reached 11,000,000.
- 1964 R.A.N. Destroyer *Voyager* sunk in collision off Jervis Bay. New South Wales Government employees granted four weeks' annual leave. Moonie to Brisbane oil pipeline opened. Northern Territory removed discrimination against Aborigines. Australian forces saw action in Malaysia. Resumption of National Service Training and establishment of special Reserve Forces announced.
- 1965 Full High Court judgement on intra-state airlines case held that intra-state services need to hold both a State licence and a Commonwealth licence. Martin Report on tertiary education tabled in House of Representatives. Economic sanctions imposed on Rhodesia.
- 1966 The New Zealand-Australia Free Trade Agreement came into force. Australia adopted decimal currency. Immigration laws amended to provide for relaxation of restrictions on entry of persons of non-European race (*see* page 157). Member for Australian Capital Territory given full voting rights. 1966 census taken. Permanent employment of married women by Commonwealth Government proclaimed.
- 1967 Worst bushfires in history of Tasmania. *Trade Practices Act* 1965-1967 came into force. Australian Resources Development Bank formed. Government decision not to devalue Australian dollar with pound sterling announced. Australia launched its first satellite at Woomera. Senate select committee recommended that Australia change over to metric system of weights and measures. Prime Minister, Rt Hon. Harold Holt drowned off Portsea, Victoria.

- 1968 Uniform Commonwealth-State censorship laws came into force. Mr J. G. Gorton sworn in as Prime Minister. Twelve-mile fishing limit around Australia, Nauru, Papua New Guinea, and Cartier Islands operated from 30 January. Nauru became an independent nation on 31 January. Joint Commonwealth-State off-shore petroleum legislation operated from 1 April. Population reached 12,000,000. Northern Territory member in House of Representatives given full voting rights. Two pulsars discovered by the Mills Cross radio telescope. The National Library of Australia was opened. *Privy Council (Limitation of Appeals) Act 1968* came into operation. Announcement of a five year \$1,000 million development plan for Papua New Guinea. An Ordinance to prevent the takeover of life insurance companies registered in the Australian Capital Territory became operative.
- 1969 The Australian stock exchanges took steps to permit differential voting rights on the shares of listed companies to prevent overseas takeovers. Sir Paul Hasluck was sworn in as Governor-General. The *Copyright Act 1968* became operative. The Arbitration Commission handed down its decision on equal pay for women (*see* page 268). The High Court ruled that the States had no rights or jurisdiction over territorial waters adjacent to their coastline or over the sea-bed. Wiltshire Report on the Colleges of Advanced Education tabled in Parliament. Reports of the Senate Select Committees on Medical and Hospital Costs, and on Air Pollution tabled in the Senate. Bass Strait under-sea oil piped to shore for the first time. Federal elections held and Liberal-Country Party coalition returned with a majority of 7.
- 1970 The *Patents Act 1969* came into effect. A Commonwealth Secondary School Scholarship Scheme for Aborigines beyond school leaving age was announced. The Federal Government imposed controls on the export of Australian natural gas. The High Court decided that the Victorian and Western Australian stamp tax, receipt tax or turnover tax, was illegal. The *Indian-Pacific* rail passenger service inaugurated. Australia signed the Nuclear Non-Proliferation Treaty. A High Court judgment in Sydney upheld the validity of the Trade Practices Tribunal. Queen Elizabeth II, Duke of Edinburgh, Prince Charles and Princess Anne commenced their Royal Visit. The *Continental Shelf (Living Natural Resources) Act 1968* came into effect, implementing Australian sovereignty over the living resources of the Continental Shelf. Vietnam Moratorium Day held on 8 May. Employers, trade unions and the Commonwealth Government agreed on new industrial dispute procedures in the Commonwealth industrial sphere. State elections held in South Australia; the Labor Party came into office with Mr Dunstan as Premier. The Senate Select Committee Water Pollution report was tabled in the Senate. The Commonwealth Parliament approved the setting up of 7 standing committees and 5 estimates committees in the Senate. The *Australian Industry Development Corporation Act 1970* assented to. The Senate rejected the Receipts Tax Bill which would have empowered the Commonwealth to collect the tax for State Governments. The *Marginal Dairy Farmers Agreement Act 1970* came into effect. The Snowy Mountains Engineering Corporation was established, replacing the Snowy Mountains Authority. The new health insurance scheme, based on the 'common fee' concept, came into operation. Tullamarine International Airport opened. The Metric Conversion Board appointed. As a step towards self-government for Papua New Guinea certain administrative functions were transferred from the Commonwealth Government to the Papua New Guinea House of Assembly. Assent was given to two land lease ordinances granting the Aborigines exclusive land leasing rights for specified purposes over the 93,000 square miles of Aboriginal reserves in the Northern Territory. Coal miners in three states were awarded a 35 hour working week which is to be phased in over a twelve month period. New film censorship procedures agreed to by Federal and State ministers. First Boeing 747 (Jumbo) aeroplane to arrive in Australia landed at Sydney. A statutory wool marketing authority, the Australian Wool Commission, was established. It was decided that the Port Phillip Bay oil line would be laid overland. Qantas, Australia's international airline, celebrated fifty years of operation. The flexible reserve wool price scheme came into operation. Senate elections held. The Pope visited Australia. Voting age reduced to 18 years in Western Australia. Prospecting rights awarded to three groups of Aborigines over 1,400 square miles of Arnhem Land reserve. Assent given to an ordinance in the Australian Capital Territory that prevented overseas takeovers of mining companies.
- 1971 *January.* The Commonwealth and States agreed on details of the rural reconstruction scheme. Victorian Aborigines to be granted ownership of reserves at Lake Tyers and Framlingham, Victoria.
- February.* The Prime Minister announced measures to control inflation. State elections held in Western Australia and the Labor Party returned for first time in twelve years.
- March.* Torrential rains broke a severe drought in south-western Queensland and north-eastern South Australia. The Prime Minister (Mr J. G. Gorton) resigned; Mr William McMahon was elected as leader of the Liberal Party and was sworn in as Prime Minister. A large company agreed to supply the A.C.T.U. discount house without any restrictions on retail selling prices.

*April.* The Royal Australian Air Force celebrated its fiftieth jubilee. South Australia lowered the age of adulthood to eighteen years. An employment scheme giving vocational training to workers displaced by technological change was announced. It was announced that the Commonwealth Government would prepare a programme for the movement of Papua New Guinea to full internal self-government in the period 1972–76. The Yirrkala Aborigines legal challenge for land rights at Gove was dismissed. Australia signed a new five power defence agreement in London.

*May.* The Senate Select Committees on Health and Welfare, and on Drug Trafficking and Drug Abuse tabled their reports in the Senate. *Public Order (Protection of Persons and Property) Act* 1971 assented to. The High Court ruled that Victoria must pay payroll tax to the Commonwealth as it does not breach the Constitution. Seabed agreement between Indonesia and Australia signed in Canberra. Mr Neville Bonner, selected to fill a Queensland Senate vacancy, the first Aboriginal member of any Australian parliament. The new Commonwealth Department of the Environment, Aborigines and the Arts created.

*June.* Australia joined the Organisation for Economic Co-operation and Development. Work started on the Melbourne underground railway. The Victorian Trades Hall Council lifted its ten month ban on construction of an ethane gas pipeline across Port Phillip Bay. The Springbok rugby team started their Australian tour; anti-apartheid demonstrations took place in all centres where matches were played. An Australian Labor Party delegation of five left for a visit to mainland China. It was announced that a new railway would be built to link Adelaide to the east-west standard gauge railway. The 1971 Census of Population and Housing was held.

*July.* First Commonwealth Government fellowships for Australian composers awarded. State of emergency declared in Queensland under the State Transport Acts for the duration of the Springbok rugby tour in that State. Sydney City Council released its strategic plan, up to the year 2000, for the City of Sydney.

*August.* The report of the Royal Commission on the Westgate Bridge disaster (October 1970) released; construction to resume in 1972. The Trade Practices Tribunal ruled that price fixing agreements made between frozen vegetable processors were contrary to the public interest. Legislation banning resale-price maintenance became operative. The two-years full-time duty under the National Service Act reduced to eighteen months (*see* page 89). The Commonwealth Government appointed Assistant Ministers (six) for the first time. The report of the Kaye Enquiry (held early in 1970) into police corruption and illegal abortion practices tabled in Victorian Parliament.

*September.* The South African cricket tour of Australia cancelled. A Victorian brewery granted workers 4 weeks annual leave with 6 weeks pay. Historic wool sale in Canberra, buyers seeing only representative samples from core tests.

*October.* Rural reconstruction employment training scheme commenced for farmers displaced from rural industry. Nationwide survey of non-government schools tabled in House of Representatives. A large finance company granted its employees a long week-end each month in addition to annual leave. The Metal Trades Industry Association and metal trades unions in New South Wales agreed on the principle of full accident pay to cover 80,000 N.S.W. unionists. Daylight saving introduced in all States, except Western Australia, and in the Australian Capital Territory (in force until 27 February 1972).

*November.* Patient's contribution for drugs under the Pharmaceutical Benefits Scheme increased from 50 cents to 1 dollar. The New South Wales Industrial Arbitration (Amendment) Act, 1971 which provided for secret ballots in relation to strike action became operative. The operational role of the Australian Task Force in South Vietnam ended; the main force returned to Australia by the end of the year. The Western Australian Government announced that it would convert to standard gauge the existing railway (258 miles) between Kalgoorlie and Esperance. New film censorship certification (*see* page 675) became operative. The Commonwealth Bureau of Roads began a nationwide survey of roads. Late night shopping was introduced in Victoria (also introduced in New South Wales in December).

*December.* Qantas granted rights to fly 4 Jumbo jet flights to U.S.A. a week in return for increased flights to Australia by two American airlines. The report of the Senate Select Committee on Off-shore Petroleum Resources tabled. Australian Commission on Advanced Education was established (*see* page 656). It was announced that the Commonwealth would make emergency grants of \$30 million over the following 18 months for non-government schools. The official value of the Australian dollar was appreciated by 6.23 per cent against the American dollar; this represented a 2.25 per cent devaluation against sterling.



1972 *January*. Female employees (approximately 1,300,000) received full entitlement to equal pay in terms of the 1969 Equal Pay Case decision (*see* page 268). The United States of America Armed Forces R & R (rest and recreation) leave programme in Australia ended. The Waterside Workers Federation agreed to the voluntary retirement of 300 waterside workers on grounds of 'redundancy'. Australia's largest trade union, with over 150,000 members came into being with the merging of the Boilermakers' and Blacksmiths' Society, and the Sheet Metal Workers' Union with the Amalgamated Engineering Union; subsequent appeals to the Arbitration Commission against the merger were rejected. It was announced that the Government would introduce a scheme of portable age, invalid, widows' pensions for pensioners who leave Australia to reside overseas.

*February*. The revised Trade Practices Act—the *Trade Practices Act 1971*—became operative. Qantas commenced \$700 return excursion flights to Europe, providing for stays of 45 days minimum and 180 days maximum. Melbourne had heaviest city rain ever recorded—3 inches between 4 p.m. and 5 p.m. Australia and Japan signed a Nuclear Co-operation Treaty. The report tabled of the Senate Standing Committee on Education, Science and the Arts, relating to the Commonwealth's Role in Teacher Education.

*March*. The New South Wales State Industrial Commission ratified an agreement to pay 25,000 steelworkers in Newcastle and Port Kembla full pay when off work through injury on the job. It was announced that legislation proclaimed by the Commonwealth, New South Wales, Victoria and South Australia cleared the way for work to proceed immediately on the Dartmouth Dam (*see* pages 843–4).

*April*. Commonwealth and State Attorneys-General recommended that a judicial inquiry be held into the operations of organisations which store information about people. State elections held in Tasmania; the Labor Party came into office with a substantial majority and Mr Reece was sworn in as Premier.

*May*. The Commonwealth Conciliation and Arbitration Commission issued its decision in the National Wage Case 1971–72 (for details *see* Appendix). State elections were held in Queensland and the Country Party–Liberal Party coalition was returned with a reduced majority. The A.C.T.U. placed a black ban on all French ships and aircraft in Australia as a protest against continuing French nuclear testing in the Pacific; this ban was followed by widespread protests against the tests. Australian radio astronomers discovered a huge cloud of organic molecules near the centre of our galaxy 30,000 light years from the earth. The Restrictive Trade Practices Tribunal decided that books should not be exempted from the ban on resale price maintenance.

*June*. Aboriginal leader Pastor Nicholls became the first Aboriginal person to receive a knighthood. A 35-hour week was granted to waterside workers. The Australian Wool Board and the Australian Wool Commission were amalgamated to form the Australian Wool Marketing Corporation. The Ord River Dam was officially opened. An oil industry maintenance workers' dispute over a log of claim (including a 35-hour week) led to a series of nationwide stoppages and a petrol and oil crisis; the dispute began in early June and was not settled until early August.



## DIARY OF PRINCIPAL ECONOMIC EVENTS, 1971-72

The principal economic events in earlier years were shown in the following issues.

<i>Years</i>	<i>Year Book No.</i>	<i>Pages</i>
1931 to 1938 . . .	33 . . .	968-77
1939 to 1944 . . .	36 . . .	1129-41
1945 to 1948 . . .	37 . . .	1235-45
1949 to 1951 . . .	39 . . .	1331-40
1952 to 1955 . . .	42 . . .	1149-60
1956 to 1958 . . .	46 . . .	1185-92
1958-59 to 1961-62 . . .	48 . . .	1188-1200
1962-63 . . .	49 . . .	1253-56
1963-64 . . .	50 . . .	1283-88
1964-65 . . .	51 . . .	1269-74
1965-66 . . .	52 . . .	1185-88
1966-67 . . .	53 . . .	1279-82
1967-68 . . .	54 . . .	1253-57
1968-69 . . .	55 . . .	1243-48
1969-70 . . .	56 . . .	1077-81
1970-71 . . .	57 . . .	1053-59

In 1971-72 the growth in overall activity fell slightly below that of 1970-71. Unemployment rose during the year from 66,000 in June 1971 to 99,000 in June 1972. The gain in net population was lower due to a fall in net migration. The growth in average employment (in male-unit terms) fell from about 3½ per cent in 1970-71 to about 1 per cent in 1971-72. Manufacturing employment fell during the year, as also did employment in the transport industry.

The strategy of the August 1971 budget was to restrain demand in order to combat increasing inflationary tendencies. However, the international monetary crisis contributed to the slackening in growth. In particular, capital expenditures on some mining and metal projects were deferred. Business and consumer confidence declined. As the year progressed, policies aimed at stimulating demand were introduced: the reduction of interest rates on government bonds, reduction of Statutory Reserve Deposits (in October 1971) and reduction of the personal income tax levy (in April 1972). In February 1972, the Commonwealth Government restored the special allowance on investment in new manufacturing plant and equipment, gave increased grants to the States to relieve rural unemployment, and increased unemployment benefits. Also, social service pensions were increased in April 1972.

The overall production performance of the economy can be summarised in the growth in gross national product measured at constant prices. This rose by 3.2 per cent in 1971-72 compared with an increase of 4.3 per cent in 1970-71. Gross non-farm product at constant prices increased by only 2.9 per cent in 1971-72 compared with increases of 4.5 per cent and 7.0 per cent in the previous two years. Gross farm product at constant prices rose by 6.2 per cent compared with 1.5 per cent in 1970-71.

The growth in wages, salaries and supplements fell off slightly in 1971-72, 11.6 per cent compared with 14.8 per cent in 1970-71. Average earnings, which increased by 11.3 per cent in 1970-71 grew by 10.4 per cent in 1971-72. The consumer price index for all groups rose 6.6 per cent in 1971-72 compared with 4.8 per cent in 1970-71.

A slow-down in the growth in demand in 1971-72 is illustrated by the 1.3 per cent increase in gross national expenditure at constant prices compared with 3.4 per cent in the preceding year. There was a decrease of \$44 million in stocks instead of the more normal increases (\$439 million in 1970-71). Other components which contributed to the slower growth in expenditure were private gross fixed capital expenditure and to a lesser extent general government net current expenditure on goods and services.

On external account, 1971-72 saw a record overall balance of payments surplus of \$1,443 million, the net result of a current account deficit of only \$434 million (the lowest since 1963-64) and a record net apparent capital inflow of \$1,876 million.

Exports (on a balance of payments basis) grew strongly to reach \$4,729 million, a rise of 12 per cent on the 1970-71 figure. This growth was spread over most commodities, with the most notable increases occurring in meat, sugar, iron and steel, transport equipment, and miscellaneous manufactured articles. Imports (on a balance of payments basis) showed no growth at all in 1971-72. As a result the trade surplus in 1971-72 rose to a record \$939 million, more than double the 1970-71 surplus. Partially offsetting this, the net deficit on current invisible transactions continued to increase, reaching \$1,373 million in 1971-72, compared with \$1,270 million in 1970-71.

In response to the realignment of major world currencies in December 1971, the Australian government decided to appreciate the Australian dollar 6.3 per cent against the U.S. dollar. This represented a 2.25 per cent official devaluation against sterling and a 9.0 per cent devaluation against the yen. The government also decided that exchange rates for the Australian dollar would be fixed on the U.S. dollar rather than, as previously, on sterling.

During the spring of 1971 climatic conditions were favourable over most of Australia. However, from the beginning of 1972 a large area of eastern Australia extending from northern Victoria to south-western Queensland suffered increasingly from drought conditions.

Farm income recovered from the low 1970-71 figures of \$892 million to \$1,108 million in 1971-72, an increase of 24 per cent. Wool prices reached their lowest level for more than 20 years during the period March-December 1971 but they improved steadily in 1972 to finish the financial year 50 per cent higher than at the beginning of the year. The Australian Wool Commission bought heavily until December 1971 to support prices, its stocks reaching a peak of nearly 1 million bales but being substantially reduced in the following six months. The gross value of wool produced was 25 per cent higher than in 1970-71, and accounted for 17 per cent of the total value of farm production. Other pastoral products, wheat and sugar cane also increased in value during 1971-72.

There were more discoveries of gas, nickel, uranium and iron-ore deposits in 1971-72. The largest open-cut coal mine in Australia was opened at Ravensworth, New South Wales. Bauxite shipments to Japan from Gove began in October 1971. However, a slump in the world iron-ore market and a reduction in orders from Japanese steel mills saw the deferment of production at the Hamersley iron ore mine at Paraburdoo. Due to the depressed nickel market plans to mine two nickel deposits at Widgiemooltha were deferred. Aluminium production was also cut back. However, contracts worth up to \$940 million were announced to supply Queensland coking coal to Japan and Europe over a ten year period.

In the finance markets, non-bank financial institutions continued to increase in relative importance. Permanent building societies gained an increased share of the housing finance markets. Financial conditions eased considerably during 1971-72 and the volume of money increased by 10 per cent from June 1971 to June 1972 compared with an increase of 7 per cent from June 1970 to June 1971. There was an improvement in the liquidity of the trading banks which increased their holdings by \$377 million, more than double the increase during 1970-71. The record capital inflow was a major source of additions to liquidity in the economy as a whole. Interest rates generally fell during 1971-72.

In the second half of the year share prices recovered. On a monthly average basis, the Sydney all ordinaries share price index rose 26 per cent and the Sydney non-ferrous metals index fell 4 per cent from June 1971 to June 1972.

The States took over the pay-roll tax from the Commonwealth in September 1971 and increased the tax rate to 3½ per cent from 2½ per cent. At an emergency Premiers' Conference held in February, a loan of \$15 million was promised to New South Wales to help meet its expected budget deficit.

There were further developments in the control of restrictive trade practices. In August 1971 legislation came into effect banning resale price maintenance (unless an exemption is granted by the Trade Practices Tribunal). Book publishers applied for exemption but were denied it. In the first test case the Commonwealth Industrial Court granted an injunction against Misaka (N.S.W.) who were found to have withheld goods from a retailer who would not sell them at a specified price.

#### 1971-72

1 July. Special cash loan of \$30 million issued to redeem a London maturity. The full amount was subscribed to the 7 per cent May 1989 security.

Special Bonds, Series 'V' issued at par with interest rates ranging from 6.4 to 7 per cent. An amount of \$51 million was raised of which \$16 million was for the redemption of Series 'A' to 'U'.

7 July. Commonwealth Pastoral Industry Award employees were granted a 5-day working week where this was feasible.

- 13 *July*. Commonwealth cash loan issued at par with interest at 6.4 per cent for 2 years 10 months, 6.8 per cent for 9 years 4 months, 7 per cent for 20 and 34 years; and at 99.80 with interest at 6.5 per cent for 4 years 7 months. An amount of \$139 million was raised. A conversion offer was made on the same terms as the cash loan for \$156 million maturing on 15 July. An amount of \$142 million was converted.

24-hour nationwide stoppage by metal trades workers in support of increased wages and other conditions of employment.

New South Wales coal miners stopped work for increased rates of pay (stoppages during August and September also).

- 16 *July*. Metal Trades Award employees received pay increases of \$6.00 a week for tradesmen and \$4.50 a week for non-tradesmen, operative from the beginning of the first pay-period commencing on or after 2 August. Subsequently employees under other awards, etc., received similar increases.
- 21 *July*. 24-hour nationwide stoppage by unionists, in support of increased social service pensions in the 1971-72 Budget.
- 27 *July*. Carpenters in Victoria held State-wide stoppages in support of wage increases (stoppages during August also).
- 1 *August*. Interstate passenger railway fares rose by 25 per cent.
- 4 *August*. A stoppage by Victorian railways traffic employees for increased wages.
- 5 *August*. The 1971-72 Tasmania Budget introduced, providing for a deficit of \$3,298,000. It was estimated that revenue would be \$154,557,000 and expenditure \$157,854,000. In 1970-71 revenue amounted to \$138,229,000 and expenditure to \$138,207,000, resulting in a surplus of \$22,000.
- 6 *August*. The Trade Practices Tribunal ruled that price fixing agreements made between frozen vegetable processors were contrary to the public interest.
- 9 *August*. Legislation banning resale-price-maintenance became operative.

- 17 *August*. The Commonwealth Budget for 1971-72 introduced into the House of Representatives. The Budget provided for estimated expenditure of \$8,833.3 million and estimated receipts of \$8,822.5 million in the year 1971-72. (Details of the 1972-73 Budget as well as the actual budget results for 1971-72 are shown in the Appendix). In 1970-71 receipts of the Commonwealth were \$8,030.2 million, and expenditure amounted to \$8,105.5 million. The main items of revenue (1969-70 figures shown in parenthesis) were: income taxes \$4,621.8 million (\$4,055.5 million); excise duties \$1,053.3 million (\$939.7 million); sales tax \$633.2 million (\$567.4 million); customs duties \$465.7 million (\$414.5 million); and pay-roll tax \$295.4 million (\$264.1 million). The main items of expenditure were: payments to or for the States, and works and housing programmes \$2,843.3 million (\$2,416.6 million); payments to the National Welfare Fund \$1,477.2 million; (\$1,341.8 million); defence services \$1,135.0 million (\$1,100.6 million); departmental running expenses \$544.0 million (\$468.6 million); advances for capital purposes \$448.5 million (\$365.3 million); Commonwealth payments to industry \$316.7 million (\$224.4 million); and repatriation services \$315.2 million (\$296.7 million).

The sale of 500,000 tons (\$25 million) of wheat to U.S.S.R. was announced.

- 21 *August*. Owing to the international monetary crisis, the opening of the wool-selling season was postponed until 31 August.
- 23 *August*. T.A.A. and Ansett passenger air fares rose by 6.5 per cent.
- The Reserve Bank directed Australian banks to refrain from trading in foreign currencies.
- 25 *August*. Federal Cabinet not to revalue the A\$ in relation to the U.S. dollar for the time being. (See 23 December 1971).
- 27 *August*. Tariff companies announced a 12.5 per cent rise in comprehensive car insurance.
- Building workers in New South Wales held State-wide stoppages (also during September) demanding wage increases.

- 1 *September*. 1971-72 Victorian Budget introduced, providing for total receipts and expenditure from consolidated funds (combining consolidated revenue and loan funds) of \$1,158,040,000. Revenues for financing loan programmes were estimated at \$190,990,000 (including Commonwealth capital grant payment of \$53,520,000) and loan expenditures were estimated to total \$182,674,000.
- 2 *September*. The 1971-72 South Australian Budget introduced, providing for a deficit of \$7,346,000; it was estimated that revenue would be \$446,622,000 and expenditure \$453,968,000. In 1970-71 revenue amounted to \$386,859,000 and expenditure to \$386,838,000 leaving a surplus of \$21,000.

The High Court invalidated the Commonwealth Trade Practices Act; the Act to be re-drafted. (see 1 February 1972).



- 8 *September*. Special Bonds, Series 'W' issued at par with interest rates ranging from 6.4 to 7 per cent maturing on 1 August 1982. An amount of \$34 million was raised for the redemption of Series 'A' to 'V'.
- 12 *September*. The restrictions on the movement of capital to and from Australia imposed by the Reserve Bank at the beginning of the international monetary crisis were lifted.
- 13 *September*. Coal mining industry employees received \$6.00 a week increase in rates of pay.
- 14 *September*. Commonwealth cash loan opened on same terms as cash loan of 13 July. An amount of \$216 million was raised. A conversion offer was made on the same terms as the cash loan for \$219 million maturing on 15 September. An amount of \$188 million was converted.
- 16 *September*. The Western Australian Budget for 1971-72 introduced. It was estimated that revenue would be \$424,402,000 and expenditure \$427,927,000 leaving a deficit of \$3,525,000.
- 23 *September*. The 1971-72 Queensland Budget introduced, providing for a deficit of \$7,087,000 with estimated revenue of \$564,302,000. In 1970-71 revenue amounted to \$499,048,000 and expenditure to \$499,569,000 leaving a deficit of \$521,000.
- 24 *September*. The sale announced of 500,000 tons of wheat (\$40 million) to United Arab Republic.
- 27 *September*. Full forward exchange facilities for Australian exporters and importers restored following suspension due to uncertainty in international monetary situation.
- 29 *September*. The 1971-72 New South Wales Budget introduced, providing for an overall deficit of \$6,711,000 after allowing for the net results of business undertakings; it was estimated that the receipts and expenditure excluding business undertakings, would be \$1,073,540,000 and \$1,078,453,000 respectively.
- 30 *September*. Freight rates for general and refrigerated cargoes shipped from Australia to Britain and the European continent rose 15.75 per cent.
- 22 *October*. Western Australian basic wages and the minimum wage for adult males were increased (see page 270).  
Building trades workers in New South Wales became entitled to receive their full weekly award wage as accident pay for periods of incapacity not exceeding 26 weeks. Subsequently other workers received similar benefits.
- 27 *October*. Second division officers in the Commonwealth Public Service were awarded salary increases of approximately 15 per cent.
- 1 *November*. Patient's contribution for drugs under the Pharmaceutical Benefits Scheme increased from 50 cents to one dollar.
- 10 *November*. Commonwealth Public Service technical and related grades employees were awarded salary increases of approximately 9 per cent.  
The Commonwealth agreed to lend the Australian Wool Commission a further \$30 million.
- 25 *November*. Late night shopping introduced in Victoria.
- 29 *November*. New South Wales government bus drivers stopped work (also during December) over the one-man operation of buses.
- 7 *December*. A claim by unions for an extra week of annual leave was rejected by the Full Bench of the Arbitration Commission (see page 271).
- 10 *December*. General Motors-Holden announced it had retrenched 1,000 of its 25,000 workers during the previous two months.
- 13 *December*. The Statutory Reserve Deposit Ratio was reduced from 8.9 to 7.1 per cent, which resulted in \$130 million being released.
- 14 *December*. Late night shopping commenced in New South Wales.
- 17 *December*. It was announced that the Commonwealth Sugar Agreement price for 1972 to 1974 was to be £stg 50 (\$A107) per ton.
- 20 *December*. Queensland male and female basic wages were increased (see page 269).
- 22 *December*. The official value of the \$A was appreciated by 6.32 per cent against the U.S. dollar; this represented a 2.25 per cent devaluation against sterling.
- 24 *December*. A cyclone caused severe damage to the Townsville area and Magnetic Island.
- 1 *January*. Bank Officers received salary increases of approximately 5 per cent.  
A conversion offer of Special Bonds Series 'X' was made for \$52 million Special Bonds Series 'K' maturing 1 January. An amount of \$28 million was converted.  
Female employees (approximately 1,300,000) received full entitlement to equal pay in terms of the 1969 Equal Pay Case decision (see page 268).  
The gold subsidy to large producers was increased from \$8 to \$12 per ounce.



- 9 *January*. End of the United States of America Armed Forces R & R (rest and recreation) programme in Australia.
- 10 *January*. The sale of 115,000 tons of raw sugar to the U.S.S.R. was announced.
- 13 *January*. At Sydney the Wool Commission sold wool from its stock pile at more than the original purchase price, for the first time in the 1971-72 wool selling season.
- 19 *January*. Officers in the Victorian State Public Service were awarded salary increases of 9 per cent.
- 25 *January*. Victorian electricity generation workers stopped work (also during February) claiming an additional week's leave on full pay. The stoppages led to major stand downs in industry.
- 27 *January*. Commonwealth cash loan of 100 million Deutsche Marks (\$384 million) issued at par with interest at 7 per cent for a period of 15 years.
- 28 *January*. General Motors Holden announced the immediate dismissal of 1240 employees from its plants in New South Wales, Victoria, and South Australia. (*see also* 10 December 1971)
- 3 *February*. Trading banks interest rates reduced; reduction in Commonwealth bond rates announced.  
The Ravensworth open-cut coal mine (near Newcastle, New South Wales) was officially opened.
- 4 *February*. Special Bonds, Series 'Y' issued at par with interest rates ranging from 5.4 to 6 per cent maturing on 1 January 1983. An amount of \$30 million was raised of which \$19 million was for the redemption of Series 'A' to 'V'.
- 8 *February*. It was announced that the wheat quota was to be increased by 20 per cent (to 407 million bushels) for the 1972-73 harvest.  
Linesmen in the P.M.G. received an increase of \$4.50 a week.
- 10 *February*. Commonwealth cash loan opened with yields of 5.3 per cent for 3 years 3 months, 5.8 per cent for 9 years 9 months and 6 per cent for 19 years 8 months and 33 years 5 months. An amount of \$207 million was raised of which \$20 million was for the redemption of a London loan maturing on 15 March 1972. A conversion offer was made on the same terms as the cash loan for \$115 million maturing on 15 February. An amount of \$90 million was converted. A further conversion offer was made on the same terms as the cash loan for \$401 million maturing on 15 May. An amount of \$379 million was converted.
- 14 *February*. Emergency Premiers' Conference and Loan Council. The Commonwealth agreed to provide the States with a special revenue grant of \$15 million; a loan of \$17.5 million to New South Wales to help meet its expected Budget deficit; and to increase its December grant of \$2.25 million per month to \$4.5 million per month to combat unemployment in rural areas. An additional \$32 million was to be provided for the States works and housing programme, and finance for the semi-government programme was to be increased by \$10 million.  
The Prime Minister announced that the special investment allowance on investment in new manufacturing plant and equipment had been restored and that the unemployment benefits for adult males would be increased by \$7 to \$17 a week, with commensurate increases for juniors.
- 15 *February*. B.H.P. Ltd announced an average rise in the price of steel of 5.3 per cent.
- 9 *March*. It was announced that the U.S.A. had raised the Australian meat import allocation for 1972 by 7.2 per cent.
- 17 *March*. It was announced that B.H.P. Ltd had signed a contract to supply 270,000 metric tons of steel to West Germany during the 1972-73 financial year.
- 20 *March*. Queensland basic wages were increased (*see* page 269).
- 6 *April*. The Pharmaceutical Benefits Scheme dispensing fee paid to chemists raised 7 cents a prescription.
- 11 *April*. The Treasurer announced the following measures to stimulate the economy and reduce unemployment: (a) the 5 per cent levy on income tax would be reduced to 2½ per cent, (b) age, invalid and widows' and service pensions would be increased by \$1.00 a week for single persons and 75 cents a week for married persons, (c) sickness benefits and war pensions would also be increased, (d) the limits of pension eligibility under the tapered means test would be raised, and (e) the operation of section 26(a) of the Income Tax Act would be changed so that profits or losses from the sale of shares (held for eighteen months or more) would not be taken into account for income tax purposes.
- 13 *April*. Blue collar workers of the State Electricity Commission of Victoria received an extra 3 days annual leave.

- 3 May. 24-hour nationwide stoppage by metal trades workers in protest against government intervention in trade union amalgamations.
- 5 May. The Commonwealth Conciliation and Arbitration Commission, in its decision in the National Wage Case 1971-72, increased total wage rates for adult males and adult females in Commonwealth awards by \$2.00 a week, and the minimum wage for adult males by \$4.70 a week. These variations operated from the beginning of the first pay-period commencing on or after 19 May 1972. (See Appendix).
- 6 May. Stoppages by newspaper printing employees in Sydney and Perth (also during May) in support of increased wages.
- 9 May. Salary increases of 5 per cent were granted to Queensland State public servants.
- 10 May. Teachers in Victoria were granted salary increases.
- 15 May. Policemen in Victoria were awarded a  $7\frac{1}{2}$  per cent pay increase.
- 23 May. Commonwealth Government approval for the production of 20 Project 'N' aircraft (subsequently named *Nomad*) was announced.
- 25 May. Announced that the 50 cents per gallon excise on wine to be halved immediately.
- 29 May. Queensland adult male and female basic wages and the minimum wage for adult males were increased (see Appendix).
- 5 June. Bank Officers received salary increases of between 2 and  $2\frac{1}{2}$  per cent.
- 7 June. The Commonwealth Conciliation and Arbitration Commission granted increased pay for annual leave (see page 271).
- 14 June. Salary increases of  $7\frac{1}{2}$  per cent were granted to third division officers in the Commonwealth Public Service and to P.M.G. postal workers.
- 19 June. A 35 hour working week was granted to waterside workers.
- 22 June. Premiers' Conference and Australian Loan Council meeting.  
Commonwealth agreed, at the Premiers' Conference, to provide in 1972-73 additional revenue assistance for the States, in the form of a permanent increase of \$112 million to the financial assistance grants.
- The Australian Loan Council approved a State works and housing programme for 1972-73 of \$982 million, consisting of borrowings of \$733.5 million and interest-free capital grants of \$248.5 million. A borrowing programme of \$488 million was approved for State semi-government and local authorities which borrow in excess of \$400,000 in a year.
- 26 June. Western Australian basic wages and the minimum wage for adult males were increased (see Appendix).
- 30 June. Special Cash Loan opened with yields of 5.3 per cent for 3 years 2 months, 5.8 per cent for 9 years 5 months, and 6 per cent for 19 years 4 months and 33 years. An amount of \$32 million was raised.
- 30 June. Oil industry maintenance workers dispute over a log of claims (including a 35 hour week) led to a series of nationwide stoppages and a petrol and oil crisis. The dispute began in early June and was not settled until early August.

## APPENDIX

Some recent information which has come to hand since the various chapters were sent to press is given in summarised form in the following pages, but for later statistics on the subjects dealt with in chapters reference should in general be made to other publications issued by this Bureau, e.g. the *Monthly Review of Business Statistics*, the *Quarterly Summary of Australian Statistics*, the *Digest of Current Economic Statistics*, and the various mimeographed statements issued on particular subjects.

### CHAPTER 3. GENERAL GOVERNMENT

#### Parliamentary government

State Premiers, March 1972, page 67

No change from page 67, except for

*Tasmania*—The Hon. E. E. Reece, M.H.A. (A.L.P.)

Leaders of the Opposition, Commonwealth and State Parliaments, March 1972, page 67

No change from page 67, except for

*Tasmania*—The Hon. E. M. Bingham (L.P.)

#### PARLIAMENTS AND ELECTIONS

Commonwealth Parliaments and Elections, page 69

At the general election for the House of Representatives held on 2 December 1972, the Liberal-Country Party coalition was defeated after 23 years in office, and the Labor Party under Mr E. G. Whitlam came into office with a good working majority. At the time of writing, details of the final majority and the composition of the Labor Ministry were not available.

### CHAPTER 7. POPULATION

#### General characteristics of the population, Censuses 1966 and 1971

Selected characteristics of the population of Australia at the 1971 Census compared with the 1966 Census are shown in this section. The 1971 Census figures are preliminary and are based on a series of advance tabulations prepared from a *10 per cent sample* of Census collectors' districts.

In conformity with the 1967 repeal of Section 127 of the Constitution, 1971 Census statistics include Aborigines. In order to provide comparability between the 1971 and 1966 Censuses, tables showing 1966 data have been amended to include Aborigines or their dwellings and therefore differ from the 1966 tables previously published.

Statistics of dwellings, inmates and facilities, and occupational status, industry and occupations of the population are shown later in this Appendix under the sections Chapter 9, Housing and Building and Chapter 20, Employment and Unemployment.

## POPULATION: AGE (GROUPED AGES)(a), BY SEX, AUSTRALIA, CENSUSES 1966 AND 1971(b)

Age last birthday (years)	Census, 30 June 1966			Census, 30 June 1971(b)			Increase 1966-1971
	Males	Females	Persons	Males	Females	Persons	
0-4	589,955	561,098	1,151,054	622,572	589,726	1,212,299	61,245
5-9	599,117	570,833	1,169,950	624,098	598,430	1,222,528	52,578
10-14	559,137	533,071	1,092,208	644,529	600,235	1,244,764	152,556
15-19	539,052	513,487	1,052,539	571,937	539,853	1,111,791	59,252
20-24	438,623	418,936	857,559	544,663	531,154	1,075,817	218,258
25-29	385,961	363,318	749,279	472,865	448,277	921,143	171,864
30-34	357,216	333,285	690,501	406,732	387,069	793,801	103,300
35-39	398,828	368,452	767,280	376,227	358,183	734,409	-32,871
40-44	397,822	378,404	776,226	403,963	379,661	783,624	7,398
45-49	344,171	335,581	679,752	398,866	385,783	784,648	104,896
50-54	324,659	318,574	643,233	335,288	336,631	671,919	28,686
55-59	276,763	267,508	544,271	306,720	307,776	614,496	70,225
60-64	216,203	220,377	436,580	247,649	261,723	509,372	72,792
65-69	162,119	195,578	357,697	187,547	205,745	393,292	35,595
70-74	115,582	161,212	276,794	127,261	168,716	295,977	19,183
75 and over	136,379	218,196	354,575	141,999	248,824	390,823	36,248
<b>Total</b>	<b>5,841,587</b>	<b>5,757,910</b>	<b>11,599,498</b>	<b>6,412,918</b>	<b>6,347,786</b>	<b>12,760,704</b>	<b>1,161,206</b>

(a) Recorded ages adjusted by distribution of ages 'not stated'. (b) Preliminary, based on a sample.  
Minus sign (-) denotes decrease.

POPULATION PROPORTIONAL AGE DISTRIBUTION, AUSTRALIA  
CENSUSES 1966 AND 1971(a)  
(Per cent)

Census	Males				Females				Persons			
	Under 15 years	15 years and under 65	65 years and over	Total	Under 15 years	15 years and under 65	65 years and over	Total	Under 15 years	15 years and under 65	65 years and over	Total
1966	29.93	62.98	7.09	100	28.92	61.10	9.99	100	29.43	62.05	8.53	100
1971(a)	29.49	63.39	7.12	100	28.17	62.01	9.82	100	28.84	62.70	8.46	100

(a) Preliminary, based on a sample.

## POPULATION: MARITAL STATUS, BY SEX, AUSTRALIA, CENSUSES 1966 AND 1971(a)

Marital status	Census, 30 June 1966			Census, 30 June 1971(a)			Increase 1966-1971
	Males	Females	Persons	Males	Females	Persons	
Never married—							
Under 15 years of age	1,747,696	1,664,529	3,412,225	1,891,200	1,788,391	3,679,591	267,366
15 years of age and over	1,252,635	902,854	2,155,489	1,321,869	940,173	2,262,042	106,553
<b>Total never married</b>	<b>3,000,331</b>	<b>2,567,383</b>	<b>5,567,714</b>	<b>3,213,069</b>	<b>2,728,564</b>	<b>5,941,633</b>	<b>373,919</b>
Married	2,600,044	2,587,196	5,187,240	2,923,803	2,927,544	5,851,347	664,107
Married but permanently separated(b)	75,438	87,536	162,974	83,128	98,803	181,931	18,957
Divorced	42,908	51,174	94,082	61,369	72,949	134,318	40,236
Widowed	122,867	464,621	587,488	131,548	519,926	651,474	63,986
<b>Grand total</b>	<b>5,841,588</b>	<b>5,757,910</b>	<b>11,599,498</b>	<b>6,412,918</b>	<b>6,347,785</b>	<b>12,760,704</b>	<b>1,161,206</b>

(a) Preliminary, based on a sample. (b) Legally or otherwise.



## POPULATION: COUNTRY OF BIRTH, BY SEX, AUSTRALIA, CENSUSES 1966 AND 1971(a)

Country of Birth	Census, 30 June 1966			Census, 30 June 1971(a)			Increase 1966-1971
	Males	Females	Persons	Males	Females	Persons	
Australia . . . . .	4,088,441	4,780,137	9,468,578	5,073,057	5,167,499	10,240,556	771,978
New Zealand . . . . .	26,174	26,311	52,485	39,750	39,647	79,397	26,912
Europe—							
United Kingdom and Republic of Ireland(b)	474,427	434,237	908,664	549,290	514,141	1,063,431	154,767
Germany . . . . .	55,799	52,910	108,709	55,562	53,871	109,434	725
Greece . . . . .	73,936	66,153	140,089	83,596	77,284	160,880	20,791
Italy . . . . .	150,138	117,187	267,325	156,582	127,123	283,705	16,380
Malta . . . . .	31,028	24,076	55,104	30,460	25,120	55,581	477
Netherlands . . . . .	55,189	44,360	99,549	54,138	44,194	98,331	-1,218
Poland . . . . .	36,496	25,145	61,641	33,082	23,518	56,600	-5,041
Other . . . . .	147,921	104,509	252,430	177,248	138,885	316,132	63,702
Total Europe . . . . .	1,024,934	868,577	1,893,511	1,139,958	1,004,136	2,144,093	250,582
Other countries . . . . .	102,039	82,885	184,924	160,153	136,504	296,657	111,733
Total born outside Australia	1,153,147	977,773	2,130,920	1,339,861	1,180,286	2,520,148	389,228
Grand Total . . . . .	5,841,588	5,757,910	11,599,498	6,412,918	6,347,785	12,760,704	1,161,206

(a) Preliminary, based on a sample. (b) Includes Ireland (undefined)  
Minus sign (—) denotes decrease.

## POPULATION: OVERSEAS BORN, BY PERIOD OF RESIDENCE IN AUSTRALIA, AND SEX, CENSUS, 1971(a)

Residents (Period of residence in years)									
	Under 1	1	2	3	4	5 years and over	Not stated	Total	Visitors
Males . . . . .	69,407	79,219	70,612	49,930	47,148	936,772	50,859	1,303,946	35,915
Females . . . . .	65,412	72,866	62,426	45,101	43,050	823,074	47,841	1,159,770	20,516
Persons . . . . .	134,819	152,085	133,037	95,031	90,198	1,759,848	98,699	2,463,717	56,431

(a) Preliminary, based on a sample.

## POPULATION: RELIGIOUS DENOMINATIONS, BY SEX, AUSTRALIA CENSUSES 1966 AND 1971

Religious denomination	Census, 30 June 1966			Census, 30 June 1971(a)			Increase 1966-1971
	Males	Females	Persons	Males	Females	Persons	
Christian—							
Baptist . . . . .	78,443	87,779	166,222	82,877	95,482	178,359	12,137
Brethren . . . . .	7,491	8,180	15,671	9,731	10,891	20,621	4,950
Roman Catholic and Catholic undefined . . . . .	1,532,930	1,509,577	3,042,507	1,718,360	1,722,057	3,440,416	397,909
Churches of Christ . . . . .	48,566	54,694	103,260	42,647	51,431	94,078	-9,182
Church of England . . . . .	1,933,567	1,951,451	3,885,018	1,956,749	2,026,093	3,982,842	97,824
Congregational . . . . .	35,933	40,689	76,622	32,554	37,587	70,141	-6,481
Greek and other Orthodox . . . . .	135,623	119,877	255,500	175,880	161,465	337,345	81,845
Jehovah's Witness . . . . .	n.a.	n.a.	n.a.	14,919	19,179	34,098	n.a.
Lutheran . . . . .	91,279	88,554	179,833	100,560	98,280	198,840	19,007
Methodist . . . . .	549,751	577,209	1,126,960	524,903	569,980	1,094,882	-32,078
Presbyterian . . . . .	513,019	532,545	1,045,564	501,082	532,025	1,033,108	-12,456
Salvation Army . . . . .	27,188	29,497	56,685	29,441	33,550	62,991	6,306
Seventh-day Adventist . . . . .	17,175	20,877	38,052	17,954	22,009	39,963	-1,911
Protestant (undefined) . . . . .	53,028	52,346	105,374	114,461	121,197	235,658	130,284
Other (including Christian undefined) . . . . .	64,663	68,481	133,144	87,529	88,542	176,070	n.a.
Total Christian . . . . .	5,088,656	5,141,756	10,230,412	5,409,646	5,589,767	10,999,413	76,900
Non-Christian—							
Hebrew . . . . .	31,303	31,972	63,275	29,204	29,515	58,719	-4,556
Muslim . . . . .	n.a.	n.a.	n.a.	12,955	8,497	21,452	n.a.
Other . . . . .	8,804	4,843	13,647	8,851	5,822	14,673	n.a.
Total non-Christian . . . . .	40,107	36,815	76,922	51,011	43,834	94,845	17,923
Indefinite . . . . .	19,905	16,645	36,550	17,253	12,924	30,177	-6,373
No religion . . . . .	61,623	34,517	96,140	515,996	336,756	852,752	756,612
No reply . . . . .	631,297	528,177	1,159,474	419,013	364,505	783,518	-375,956
Grand Total . . . . .	5,841,588	5,757,910	11,599,498	6,412,918	6,347,786	12,760,704	1,161,206

(a) Preliminary, based on a sample.

**POPULATION, 15 YEARS OF AGE AND OVER, BY  
HIGHEST LEVEL OF QUALIFICATIONS OBTAINED  
AUSTRALIA, CENSUS 30 JUNE 1971(a)**

<i>Highest level of qualification obtained</i>	<i>Male</i>	<i>Females</i>	<i>Persons</i>	
			<i>Total</i>	<i>Percentage of population aged 15 years and over</i>
<b>Tertiary—</b>				
Higher degree or equivalent . . . . .	19,679	4,126	23,806	0.26
Bachelor degree, post graduate diploma or equivalent . . . . .	115,280	43,881	159,161	1.75
Other than university degree or equivalent . . . . .	151,351	131,351	282,702	3.11
<b>Technician . . . . .</b>	146,188	142,712	288,900	3.18
<b>Trade . . . . .</b>	796,494	69,434	865,928	9.54
<b>Qualification not classifiable by level . . . . .</b>	48,161	120,767	168,928	1.86
<i>Total with qualifications . . . . .</i>	<i>1,277,153</i>	<i>512,271</i>	<i>1,789,425</i>	<i>19.70</i>
<b>Without qualifications . . . . .</b>	<b>3,244,566</b>	<b>4,047,123</b>	<b>7,291,688</b>	<b>80.30</b>
<b>Total aged 15 years and over . . . . .</b>	<b>4,521,719</b>	<b>4,559,394</b>	<b>9,081,113</b>	<b>100.00</b>

(a) Preliminary, based on a sample.

## CHAPTER 9. HOUSING AND BUILDING

### Census dwellings, page 191

#### DWELLINGS: URBAN AND RURAL, AUSTRALIA, CENSUS 30 JUNE 1971

<i>Division</i>	<i>Occupied</i>		<i>Total</i>		<i>Unoccupied</i>	
	<i>Private</i>	<i>Other than private</i>	<i>Number</i>	<i>Percentage of total</i>	<i>Number</i>	<i>Percentage of total</i>
<b>Urban—</b>						
Major . . . . .	2,428,932	10,831	2,439,763	65.99	142,711	42.10
Other . . . . .	755,588	8,502	764,090	20.67	94,077	27.75
<b>Rural . . . . .</b>	<b>486,086</b>	<b>7,056</b>	<b>493,142</b>	<b>13.34</b>	<b>102,217</b>	<b>30.15</b>
<b>Total . . . . .</b>	<b>3,670,606</b>	<b>26,389</b>	<b>3,696,995</b>	<b>100.00</b>	<b>339,005</b>	<b>100.00</b>

#### DWELLINGS: STATES AND TERRITORIES, CENSUSES, 1966 AND 1971

<i>State or Territory</i>	<i>Census, 30 June 1966</i>		<i>Census, 30 June 1971</i>	
	<i>Occupied</i>	<i>Unoccupied</i>	<i>Occupied</i>	<i>Unoccupied</i>
<b>New South Wales . . . . .</b>	<b>1,190,010</b>	<b>101,546</b>	<b>1,364,969</b>	<b>124,504</b>
<b>Victoria . . . . .</b>	<b>889,053</b>	<b>64,757</b>	<b>1,015,628</b>	<b>88,509</b>
<b>Queensland . . . . .</b>	<b>450,309</b>	<b>41,818</b>	<b>518,010</b>	<b>51,068</b>
<b>South Australia . . . . .</b>	<b>302,626</b>	<b>25,110</b>	<b>344,236</b>	<b>30,550</b>
<b>Western Australia . . . . .</b>	<b>225,701</b>	<b>17,965</b>	<b>287,156</b>	<b>28,269</b>
<b>Tasmania . . . . .</b>	<b>99,366</b>	<b>10,800</b>	<b>110,467</b>	<b>13,302</b>
<b>Northern Territory . . . . .</b>	<b>8,637</b>	<b>380</b>	<b>18,408</b>	<b>929</b>
<b>Australian Capital Territory . . . . .</b>	<b>23,555</b>	<b>1,497</b>	<b>38,121</b>	<b>1,874</b>
<b>Australia . . . . .</b>	<b>3,189,257</b>	<b>263,873</b>	<b>3,696,995</b>	<b>339,005</b>

**OCCUPIED DWELLINGS BY CLASS, AUSTRALIA  
CENSUSES 1966 AND 1971(a)**

Class of dwelling	Census, 30 June 1966		Census, 30 June 1971(a)		Inter-censal increase or decrease
	Total dwellings	Percentage of total occupied dwellings	Total dwellings	Percentage of total occupied dwellings	
Private dwellings—					
Private house . . . . .	2,683,310	84.14	3,084,825	83.40	401,515
Villa unit . . . . .	(b)	(b)	40,421	1.09	n.a.
Self-contained flat . . . . .	345,645	10.84	452,497	12.23	106,852
Other private dwellings . . . . .	126,385	3.96	95,207	2.57	-31,178
<i>Total private dwellings</i> . . . . .	<i>3,155,340</i>	<i>98.94</i>	<i>3,672,949</i>	<i>99.30</i>	<i>517,609</i>
Non-private dwellings . . . . .	33,917	1.06	26,599	0.72	-7,318
<b>Total occupied dwellings</b> . . . . .	<b>3,189,257</b>	<b>100.00</b>	<b>3,699,549</b>	<b>100.00</b>	<b>510,291</b>

(a) Preliminary, based on a sample. (b) Villa units were not separately identified at the 1966 Census.

**NUMBER OF INMATES BY CLASS OF DWELLING, AUSTRALIA  
CENSUSES 1966 AND 1971(a)**

	Census 30 June 1966		Census 30 June 1971(a)		Inter-censal increase or decrease
	Total population	Percentage of total population	Total population	Percentage of total population	
Persons enumerated in—					
Private dwellings—					
Private house . . . . .	9,836,987	84.81	10,852,695	85.05	1,015,708
Villa unit . . . . .	(b)	(b)	89,762	0.70	(b)
Self-contained flat . . . . .	834,179	7.19	1,030,342	8.07	196,163
Other private dwellings . . . . .	284,084	2.45	202,210	1.58	-81,874
<i>Total private dwellings</i> . . . . .	<i>10,955,250</i>	<i>94.45</i>	<i>12,175,009</i>	<i>95.41</i>	<i>1,219,759</i>
Non-private dwellings . . . . .	594,081	5.12	(c)585,695	4.59	(d)
<b>Total</b> . . . . .	<b>11,549,331</b>	<b>99.57</b>	<b>(c)12,760,704</b>	<b>100.00</b>	<b>(d)</b>
Persons not enumerated in dwellings—					
Campers out . . . . .	30,478	0.26	n.a.	..	n.a.
Migratory . . . . .	19,688	0.17	n.a.	..	n.a.
<b>Total population</b> . . . . .	<b>11,599,497</b>	<b>100.00</b>	<b>12,760,704</b>	<b>100.00</b>	<b>1,161,207</b>

(a) Preliminary, based on a sample. (b) Villa units were not separately identified at the 1966 Census. (c) Include campers out and migratory which cannot be separately identified in sample data. (d) Data are not comparable, see (b).

**OCCUPIED PRIVATE HOUSES AND SELF-CONTAINED FLATS, BY MATERIAL  
OF OUTER WALLS, AUSTRALIA, CENSUSES 1966 AND 1971(a)**

Material of outer walls	Census, 30 June 1966				Census, 30 June 1971(a)			
	Private houses	Percentage of total	Self-contained flats	Percentage of total	Private houses	Percentage of total	Self-contained flats	Percentage of total
Brick . . . . .	674,335	25.13	224,962	65.08	889,794	28.84	320,910	70.92
Brick veneer(b) . . . . .	262,160	9.77	16,250	4.70	383,537	12.43	22,659	5.01
Stone . . . . .	68,919	2.57	6,515	1.88	71,808	2.33	5,911	1.31
Concrete . . . . .	68,187	2.54	17,678	5.11	69,696	2.26	30,125	6.66
Timber . . . . .	1,076,967	40.14	50,276	14.55	1,126,336	36.51	47,816	10.57
Metal . . . . .	28,770	1.07	1,171	0.34	38,799	1.26	994	0.22
Fibro-cement . . . . .	495,718	18.47	28,577	8.27	498,066	16.15	23,784	5.26
Other . . . . .	8,254	0.31	216	0.06	6,789	0.22	299	0.07
<b>Total</b> . . . . .	<b>2,683,310</b>	<b>100.00</b>	<b>345,645</b>	<b>100.00</b>	<b>3,084,825</b>	<b>100.00</b>	<b>452,497</b>	<b>100.00</b>

(a) Preliminary, based on a sample. (b) So described on individual census schedules.

# OCCUPIED PRIVATE DWELLINGS, BY NUMBER OF ROOMS AND CLASS OF DWELLING AUSTRALIA, CENSUSES 1966 AND 1971(a)

Number of rooms per dwelling(b)	Census, 30 June 1966				Census, 30 June 1971(a)			
	Private house	Self- contained flat	Other	Total private dwellings	Private house	Self- contained flat	Other(c)	Total private dwellings
1 . . . . .	2,235	7,804	41,954	51,993	5,837	15,852	42,855	64,543
2 . . . . .	15,107	50,859	37,424	103,390	24,748	74,714	31,587	131,049
3 . . . . .	63,041	93,593	23,189	179,823	98,128	132,956	23,054	254,138
4 . . . . .	369,582	113,632	11,081	494,295	466,826	156,363	23,856	647,046
5 . . . . .	1,055,840	50,906	6,090	1,112,836	1,323,637	50,800	7,516	1,381,953
6 . . . . .	697,273	18,746	3,420	719,439	725,364	13,185	3,060	741,610
7 . . . . .	305,797	6,104	1,706	313,607	279,318	4,327	1,151	284,795
8 and over . . . . .	174,435	4,001	1,521	179,957	160,967	4,299	2,548	167,815
<b>Total private dwellings . . . . .</b>	<b>2,683,310</b>	<b>345,645</b>	<b>126,385</b>	<b>3,155,340</b>	<b>3,084,825</b>	<b>452,497</b>	<b>135,628</b>	<b>3,672,949</b>
<b>Average number of rooms per dwelling . . . . .</b>	<b>5.48</b>	<b>3.72</b>	<b>2.42</b>	<b>5.16</b>	<b>5.33</b>	<b>3.51</b>	<b>2.62</b>	<b>5.00</b>

(a) Preliminary, based on a sample. (b) Rooms do not include bathrooms, toilets, pantries, laundries, storerooms, halls or rooms used only for business purposes. Permanently enclosed sleep-outs are included as rooms. A combined-purpose room such as a living-dining or kitchen-dining room is counted as one room. (c) Includes 'villa unit'.

## OCCUPIED PRIVATE HOUSES AND SELF-CONTAINED FLATS, BY NATURE OF OCCUPANCY, AUSTRALIA, CENSUSES 1966 AND 1971(a)

	Census, 30 June 1966				Census, 30 June 1971(a)			
	Private houses	Per- centage of total	Self- contained flats	Per- centage of total	Private houses	Per- centage of total	Self- contained flats	Per- centage of total
Owner or purchaser by instal- ments . . . . .	2,124,004	79.16	72,713	21.04	2,329,830	75.53	92,810	20.51
Tenant of government authority . . . . .	133,104	4.96	27,348	7.91	166,878	5.41	36,293	8.02
Other tenant . . . . .	361,671	13.48	237,488	68.71	430,137	13.94	301,106	66.54
Other methods of occupancy . . . . .	48,446	1.81	5,645	1.63	101,387	3.29	10,082	2.23
Not stated . . . . .	16,085	0.60	2,451	0.71	56,593	1.83	12,206	2.70
<b>Total . . . . .</b>	<b>2,683,310</b>	<b>100.00</b>	<b>345,645</b>	<b>100.00</b>	<b>3,084,825</b>	<b>100.00</b>	<b>452,497</b>	<b>100.00</b>

(a) Preliminary, based on a sample.

## OCCUPIED PRIVATE HOUSES AND SELF-CONTAINED FLATS, BY FACILITIES, AUSTRALIA, CENSUSES 1966 AND 1971(a)

Facilities	Census 30 June 1966		Census 30 June 1971(a)	
	Private houses	Self- contained flats	Private houses	Self- contained flats
With gas only . . . . .	5,193	486	2,722	198
With electricity only . . . . .	1,506,229	128,094	1,825,588	231,357
With gas and electricity . . . . .	1,139,949	214,897	1,226,221	214,413
Neither gas nor electricity . . . . .	24,109	272	10,313	238
Not stated . . . . .	7,830	1,896	19,980	6,290
<b>Total . . . . .</b>	<b>2,683,310</b>	<b>345,645</b>	<b>3,084,825</b>	<b>452,497</b>
With television set . . . . .	2,154,520	235,106	2,485,799	306,030

(a) Preliminary, based on a sample.



## CHAPTER 10. LABOUR, WAGES AND PRICES

### Determination of wage rates in Australia

On 5 May 1972, the Commonwealth Conciliation and Arbitration Commission, in its decision in the National Wage Case 1971-72, increased total wage rates for adult males and adult females in Commonwealth awards by \$2.00 a week, and the minimum wage for adult males by \$4.70 a week. These variations operated from the beginning of the first pay-period commencing on or after 19 May 1972.

Subsequent to this decision, State award wage rates were increased as follows.

In New South Wales, the basic wages for adult males and adult females were increased by \$2.00 a week, operative on and from 19 May 1972.

Victorian total wage rates for adult males and adult females were increased by \$2.00 a week and the minimum wage for adult males by \$4.70 a week, both operative as from the first pay-period commencing on or after 19 May 1972.

In Queensland, the basic wage for adult males was increased by 40 cents a week, the basic wage for adult females by 75 cents a week, and the minimum wage for adult males by \$4.70 a week. These increases operated as from 29 May 1972.

The South Australian State living wages for adult males and adult females were increased by \$2.00 a week and the minimum wage for adult males by \$4.70 a week, both operative on and from 19 May 1972.

Tasmanian basic wages for adult males and adult females were increased by \$2.00 a week and the minimum wage for adult males by \$4.70 a week, these increases operating from the beginning of the first pay-period commencing on or after 19 May 1972.

On 23 June 1972, the Western Australian Industrial Commission determined that the basic wage for adult males be increased by \$1.00 a week, the basic wage for adult females by \$1.50 a week, and the minimum wage for adult males by \$2.00 a week. These increases operated on and from 26 June 1972.

## CHAPTER 11, OVERSEAS TRANSACTIONS

### Overseas borrowings by companies in Australia

From September quarter 1971 a survey of overseas borrowings by companies in Australia was instituted to provide more frequent and comprehensive information on private capital inflow in the form of overseas borrowings by both overseas-owned and locally-owned companies in Australia. *Borrowings* broadly comprise all main forms of private capital inflow into companies other than through share purchases or undistributed income.

The following tables show preliminary information for two main statistical aggregates—outstandings at a point of time and net borrowing during a period. *Outstandings* represent the amount of borrowings owing to overseas lenders at the date specified. *Net borrowing* comprises generally only those changes in outstandings which affect the aggregate liabilities of companies in Australia to overseas residents arising from the flow (not necessarily across national frontiers) of funds, goods and services.

A detailed statement of scope, coverage, definitions, etc., is given in the bulletin, *Overseas Borrowings by Companies in Australia*, September quarter 1971 (5.39).

All amounts shown in the tables are rounded to the nearest million dollars.

**TOTAL OVERSEAS BORROWINGS BY COMPANIES IN AUSTRALIA  
OUTSTANDINGS AND NET BORROWING, BY TYPE OF BORROWER  
AND TYPE OF LENDER**

(\$ million)

Type of lender	Type of borrower		Total	
	Direct investment companies in Australia	Other companies in Australia		
OUTSTANDINGS AT 30 JUNE 1971				
Related companies overseas . . . . .	3,757	(a)	3,757	
Unrelated companies overseas . . . . .	535	562	1,097	
Total . . . . .	4,292	562	4,855	
OUTSTANDINGS AT 30 JUNE 1972				
Related companies overseas . . . . .	4,081	(a)	4,081	
Unrelated companies overseas . . . . .	840	758	1,599	
Total . . . . .	4,922	758	5,680	
NET BORROWINGS DURING YEAR ENDED 30 JUNE 1972				
Related companies overseas . . . . .	444	(a)	444	
Unrelated companies overseas . . . . .	298	211	509	
Total . . . . .	742	211	954	

(a) Not applicable.

**TOTAL OVERSEAS BORROWINGS BY COMPANIES IN AUSTRALIA  
OUTSTANDINGS AND NET BORROWING, BY TYPE OF BORROWING  
AND INDUSTRY SECTOR OF BORROWER**

(\$ million)

Industry sector of borrower	Type of borrowing			Total
	Branch liabilities to Head Office	Inter-company indebtedness of subsidiaries	Other overseas borrowing	
OUTSTANDINGS AT 30 JUNE 1971				
Primary(a)	769	8	534	1,310
Manufacturing	85	383	947	1,415
Other	428	544	1,157	2,129
Total	1,282	935	2,638	4,855
OUTSTANDINGS AT 30 JUNE 1972.				
Primary(a)	818	21	880	1,718
Manufacturing	100	324	1,135	1,559
Other	434	510	1,459	2,403
Total	1,352	854	3,474	5,680
NET BORROWING DURING THE YEAR ENDED 30 JUNE 1972.				
Primary(a)	49	15	352	416
Manufacturing	15	-40	207	183
Other	9	-2	348	355
Total	73	-27	907	954

(a) Includes Mining.

## CHAPTER 18, PUBLIC FINANCE

## Commonwealth Finance—Commonwealth Budget, 1972-73

(see page 1051 for particulars of 1971-72 Budget)

The 1972-73 Commonwealth Budget provided for an estimated outlay of \$10,162 million (\$9,101 million in 1971-72) and estimated receipts of \$9,531 million (\$8,914 million in 1971-72). The deficit for 1972-73 was thus estimated at \$630 million (\$187 million in 1971-72).

## Outlay

OUTLAY OF COMMONWEALTH BUDGET  
(\$ million)

	1971-72	1972-73 Estimate
Outlay—		
Net expenditure on goods and services—		
Current expenditure—		
Defence . . . . .	1,136	1,244
Repatriation . . . . .	108	119
Development of resources and assistance to industry . . . . .	198	218
Civil aviation . . . . .	50	55
Immigration . . . . .	51	54
Law, order and public safety . . . . .	25	27
Education . . . . .	69	82
Health and welfare . . . . .	95	110
Foreign affairs . . . . .	41	45
All other . . . . .	405	451
Total current expenditure . . . . .	2,178	2,407
Capital expenditure—		
Public enterprises—		
Houses and flats . . . . .	1	249
Other . . . . .	40	
General and government—		
Transport . . . . .	62	249
Other . . . . .	120	
Total capital expenditure . . . . .	222	249
Total net expenditure on goods and services . . . . .	2,401	2,656
Transfer payments—		
Cash benefits to persons . . . . .	2,055	2,417
Grants to States . . . . .	2,373	2,716
Interest paid . . . . .	616	649
Transfers overseas . . . . .	205	234
Subsidies . . . . .	382	338
Grants for private capital purposes . . . . .	43	56
Total transfer payments . . . . .	5,674	6,410
Total expenditure . . . . .	8,075	9,066
Net advances—		
to States—Works purposes . . . . .	533	586
Housing . . . . .		
Other . . . . .		
Total . . . . .	53	58
to Commonwealth authorities—Post Office . . . . .	270	288
S.M.H.E.A. . . . .	16	10
Airlines . . . . .	52	37
Other . . . . .	37	52
Total . . . . .	375	387
to Other Sectors—by War Service Homes . . . . .	17	23
Other . . . . .	47	43
Total . . . . .	64	66
Total net advances . . . . .	1,025	1,096
Total Outlay . . . . .	9,101	10,162



The main increases in Budget allocation in 1972-73 compared with 1971-72 were in relation to Payments to or for the States, and Works and housing programmes (\$3,055 million to \$3,449 million), National Welfare Fund (\$1,752 million to \$2,078 million), Defence services (\$1,217 million to \$1,323 million), Departmental running expenses (\$641 million to \$703 million), and Repatriation services (\$352 million to \$388 million). The estimated increases are due mainly to the following additional commitments.

*Payments to or for the States.* The estimated increase in the financial assistance grants of \$213 million is affected by the arrangements under which payroll tax revenues were transferred to the States in 1971-72. Under these arrangements, these grants were reduced to offset most of the loss in Commonwealth Budget revenues resulting from the transfer.

*National Welfare Fund.* The measures announced in the Budget Speech are estimated to add \$155 million to expenditures in 1972-73 and \$227 million in a full year. The proposed measures are as follows:

*Social Services Benefits*—Increase by \$1.75 a week and \$1.25 a week, respectively, the standard and married rates of pension and similar benefits. Extend eligibility for pension to the wives of all age and invalid pensioners. Increase rate of supplementary assistance by \$2.00 a week. Extend eligibility for supplementary assistance to married couples paying rent. Increase permissible means under the means test by \$10.00 a week and \$17.50 a week for single persons and married couples respectively. Capitalise value of annuities and superannuation pensions for means test purposes. Increase deduction from income for means test purposes for each dependent child of a pensioner by \$2.00 a week. Increase rate of personal care subsidy by \$5.00 a week.

*Health Benefits*—Introduce additional nursing home benefit for pensioners. Introduce a domiciliary care benefit. Increase subsidy for approved home nursing organisations. Increase rates of tuberculosis allowances in line with increases proposed for social service pensioners.

*Housing*—Increase homes savings grant by \$250. Increase maximum value of eligible home by \$5,000. Liberalise conditions to be met by a credit union under the homes savings grants scheme.

*Repatriation services.* The proposals announced in the Budget Speech are estimated to cost \$29 million in 1972-73 and \$39 million in a full year. The proposed measures are as follows:

*Increase war pensions*—general rate by \$2.00 a week, special rate by \$3.50 a week, intermediate rate by \$2.75 a week, war widows by \$1.75 a week, war orphans, father dead—each child by \$0.35 a week, both parents dead—each child by \$0.70 a week. Continue payment on war pensions to student children 16 to 20 years not in receipt of education living allowances. Increase fifth schedule allowances (items 7-15) by various amounts. Increase attendants allowances—higher rate by \$1.50 a week, lower rate by \$1.00 a week. Increase war widows domestic allowance by \$0.50 a week. Increase general, agricultural and industrial education allowances under the Soldiers' Children Education Scheme. Introduce additional ordinary nursing home benefits for certain repatriation beneficiaries. Increase service pensions and allowances and ease means tests comparable to those for social service pensioners. Other repatriation proposals (adjustments to fifth schedule allowances (items 1-6) and the rates of sustenance allowance consequential on the proposed increases in the general and special rates of war pension).

## Receipts

### RECEIPTS OF COMMONWEALTH BUDGET (\$ million)

	1971-72	1972-73 Estimates
Receipts—		
Taxation—		
Indirect taxes . . . . .	2,525	2,620
Income taxes on companies . . . . .	1,535	1,564
Income taxes on persons—P.A.Y.E. . . . .	2,889	3,278
Other . . . . .	876	926
Estate and gift duties . . . . .	76	75
Other direct taxes, fees, fines, etc. . . . .	58	63
Total taxation . . . . .	7,959	8,526
Other receipts—		
Interest, rent and dividends, etc. . . . .	885	938
Gross income of public enterprises . . . . .	62	65
Net sales of existing assets . . . . .	8	2
Total other receipts . . . . .	955	1,005
<b>Total Receipts . . . . .</b>	<b>8,914</b>	<b>9,531</b>

The proposed revenue measures announced in the Budget Speech are estimated to reduce receipts by a net \$434 million in 1972-73 and \$583 million in a full year. The proposed measures included:

*Income tax on individuals*—reduction in rates of income tax payable, increase dependants' allowances by \$52 per annum, increase minimum taxable income from \$417 to \$1,041 per annum, deduction of up to \$400 per annum for a range of expenditures made by a taxpayer on his own education. *Gift Duty*—increase in exemption level to \$10,000. *Estate Duty*—a doubling in the outright statutory exemptions for both general and primary producer estates. *Sales Tax*—exemption from tax of imported works of art. *A.C.T. Stamp Duty*—increase in rate of duty on transactions in marketable securities. *Excise Duty, etc.*—impose tax of 3 cents per litre on liquefied petroleum gas used in road vehicles, and remove exemption on petroleum products derived from shale. *Other revenue*—Air Navigation Charges, Light Dues.

## CHAPTER 20. EMPLOYMENT AND UNEMPLOYMENT

### The population census

#### POPULATION, BY OCCUPATIONAL STATUS, AUSTRALIA, CENSUS 30 JUNE 1971(a)

Occupational status	Males	Females	Persons	Proportion of total population		
				Males	Females	Persons
In labour force—						
Employed—						
Employer . . . . .	216,691	60,267	276,958	3.38	0.95	2.17
Self employed . . . . .	305,430	78,360	383,791	4.76	1.23	3.01
Employed on wage or salary . . . . .	3,033,332	1,494,005	4,527,337	47.30	23.54	35.48
Helper, unpaid . . . . .	10,387	22,985	33,372	0.16	0.36	0.26
<i>Total employed . . . . .</i>	<i>3,565,841</i>	<i>1,655,617</i>	<i>5,221,458</i>	<i>55.60</i>	<i>26.08</i>	<i>40.92</i>
Unemployed—						
Looking for first job . . . . .	7,229	6,558	13,786	0.11	0.10	0.11
Other unemployed . . . . .	43,669	26,321	69,989	0.68	0.41	0.55
<i>Total unemployed . . . . .</i>	<i>50,897</i>	<i>32,878</i>	<i>83,776</i>	<i>0.79</i>	<i>0.52</i>	<i>0.66</i>
<i>Total in labour force . . . . .</i>	<i>3,616,739</i>	<i>1,688,495</i>	<i>5,305,234</i>	<i>56.40</i>	<i>26.60</i>	<i>41.57</i>
Not in labour force—						
Aged 0-14 years . . . . .	1,891,199	1,788,391	3,679,591	29.49	28.17	28.84
Other not in labour force . . . . .	904,979	2,870,899	3,775,879	14.11	45.23	29.59
<i>Total not in labour force . . . . .</i>	<i>2,796,178</i>	<i>4,659,290</i>	<i>7,455,470</i>	<i>43.60</i>	<i>73.40</i>	<i>58.43</i>
<i>Grand total . . . . .</i>	<i>6,412,918</i>	<i>6,347,786</i>	<i>12,760,704</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>

(a) Preliminary, based on a sample.

## EMPLOYED POPULATION: BY OCCUPATION, AUSTRALIA, CENSUS 30 JUNE 1971(a)

<i>Occupation (major group)</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Proportion of total</i>
				<i>Per cent</i>
Professional, technical and related workers . . . . .	318,796	224,934	543,730	10.41
Administrative, executive and managerial workers . . . . .	303,413	40,961	344,373	6.60
Clerical workers . . . . .	295,106	529,327	824,433	15.79
Sales workers . . . . .	219,841	205,928	425,768	8.15
Farmers, fishermen, hunters, timber getters and related workers . . . . .	347,164	63,303	410,467	7.86
Miners, quarrymen and related workers . . . . .	33,374	211	33,585	0.64
Workers in transport and communication . . . . .	253,058	39,104	292,162	5.60
Tradesmen, production-process workers and labourers, n.e.c. . . . .	1,447,399	224,538	1,671,937	32.02
Service, sport and recreation workers . . . . .	144,005	246,173	390,178	7.47
Members of armed services . . . . .	49,009	2,171	51,180	0.98
Occupation inadequately described or not stated . . . . .	154,676	78,961	233,646	4.47
<b>Total employed(b)</b> . . . . .	<b>3,565,841</b>	<b>1,655,608</b>	<b>5,221,458</b>	<b>100.00</b>

(a) Preliminary, based on a sample. (b) Persons who, during the week prior to the Census, were unemployed or who were classified as 'not in the labour force' are not included in this table.

## EMPLOYED POPULATION: BY INDUSTRY, AUSTRALIA, CENSUS 30 JUNE 1971(a)

<i>Industry division (A.S.I.C.(b) )</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Proportion of total</i>
				<i>Per cent</i>
Agriculture, forestry, fishing and hunting . . . . .	324,245	70,305	394,550	7.56
Mining . . . . .	65,321	5,694	71,015	1.36
Manufacturing . . . . .	893,552	311,347	1,204,899	23.08
Electricity, gas and water . . . . .	82,007	7,147	89,154	1.71
Construction . . . . .	389,775	20,684	410,460	7.86
Wholesale and retail trade . . . . .	603,834	388,708	992,542	19.01
Transport and storage . . . . .	238,422	32,849	271,271	5.20
Communication . . . . .	78,834	24,503	103,337	1.98
Finance, insurance, real estate and business services . . . . .	207,329	157,675	365,005	6.99
Public administration and defence . . . . .	202,007	69,497	271,503	5.20
Community services . . . . .	225,443	341,788	567,230	10.86
Entertainment, recreation, restaurants, hotels and personal services . . . . .	107,904	157,618	265,522	5.09
Not classifiable to industry . . . . .	147,169	67,801	214,970	4.12
<b>Total employed(c)</b> . . . . .	<b>3,565,841</b>	<b>1,655,617</b>	<b>5,221,458</b>	<b>100.00</b>

(a) Preliminary, based on a sample. (b) Australian Standard Industrial Classification, see page 720. (c) Persons who, during the week prior to the Census, were unemployed or who were classified as 'not in the labour force' are not included in this table.





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